

*Product Specifications Reference  
Lenovo® ThinkCentre Desktops  
2005 to 2013.11 - withdrawn*

*November 2013 - Version 446*



Lenovo ThinkCentre A61e with  
ThinkVision widescreen monitor

# ThinkCentre® E50 Small Desktop (8294) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	L2 cache	EM64T	Memory <sup>8</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Modem	Preload warranty <sup>1</sup>	Avail date		
E50	8294-D1U	3x3	Pentium®4 630	3.00	2MB	EM64T 512MB	None	80GB <sup>2</sup>	CD-RW	GMA 900	915GV	10/100	No	XP Pro	1-yr	Oct 05	
E50	8294-E1U	3x3	Pentium 4 640	3.20	2MB	EM64T 512MB	None	80GB	Combo	GMA 900	915GV	10/100	No	XP Pro	1-yr	Oct 05	
<b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b>																	
Positioning		<b>Essential business features, exceptional value</b>										<b>Small Desktop</b>					
Processor		Intel® Pentium 4 Processor 630 (3.00GHz) or 640 (3.20GHz) with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, EIST and 800MHz system bus															
L2 cache Implementation		2MB std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										<ul style="list-style-type: none"> <li>Business black color with silver accents</li> <li>12.8"W X 16.14"D X 4.21"H</li> <li>325mm W X 410mm D X 107mm H</li> <li>18 to 23lb (8.2 to 10.4kg)</li> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, optional diskette</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> </ul>					
Memory - std/max <sup>8</sup>		512MB std / 4GB max										<ul style="list-style-type: none"> <li>Slot 1: Low Profile, 32-bit PCI 2.3</li> <li>Slot 2: Low Profile, 32-bit PCI 2.3</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3</li> </ul>					
Memory		Four 240-pin DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable															
Graphics		Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector															
SATA disk		80GB / SATA300 7200 rpm										<b>SECURITY</b>					
SATA controller		Serial ATA / 150 MB/sec SATA150 / integrated in ICH6															
SATA cables		One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar															
EIDE CD-RW		Some: 48X/32X/48X Max <sup>4</sup> CD-RW															
EIDE Combo		Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo															
EIDE controller		Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)										<ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- No security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul>					
EIDE cables		One 2-drop EIDE cable to optical / one EIDE connector on planar															
Diskette drive		None															
Chipset		Intel 915GV Express Chipset / 82915GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls															
Front ports		Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports		Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports		Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]															
Audio		Integrated digital audio / AC '97 interface / Realtek ALC655 codec															
Beeper		One internal beeper															
Ethernet		10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot										<ul style="list-style-type: none"> <li>DMI 2.0-compliant</li> </ul>					
Modem		None										ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>					
Keyboard		104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black										<b>LIMITED WARRANTY<sup>1</sup></b>					
Mouse		Optical Wheel Mouse (USB only), 400 dpi, black															
Power supply		180 watts / universal / manual switch										<ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>					
<b>Preload with Windows XP Professional<sup>5</sup></b>		<b>Accessories</b>															
Microsoft® Windows® XP Professional with Service Pack 2		256MB PC2-4200 CL4 NP DDR2 UDIMM		73P4970		512MB PC2-4200 CL4 NP DDR2 UDIMM		73P4971		1GB PC2-4200 CL4 NP DDR2 UDIMM		73P4972		160GB Serial ATA300 Disk (7200 rpm)		09N4254	
- Disk-to-Disk Recovery (in hidden protected area)		250GB Serial ATA300 Disk (7200 rpm)		41N3015		Super Multi-Burner DL DVD±RW Drive		41N5581		USB 2.0/Analog Headset by Sennheiser		40Y8518		USB 2.0 Memory Key 1GB		40Y7421	
<b>Preloaded</b>		USB 2.0 CD-RW/DVD-ROM Combo II Drive		40Y8637		USB 2.0 Portable 80GB Hard Disk		40Y8726		USB 2.0 Super Multi-Burner Drive		41N5565		Lenovo L191 19" Monitor (black)		6135AB1	
• Rescue and Recovery™		Lenovo D221 Wide 22" Monitor (black)		6622HB2		ThinkVision® L171p 17" Monitor (black)		9417HC2		ThinkVision L192p 19" Monitor (black)		9419HC2		ThinkVision L201p 20.1" Monitor (black)		9220HB1	
• Access Program		PRO/1000T Desktop Adapter by Intel		22P6501		Preferred Pro USB Keyboard		73P5220		Optical 3-Button ScrollPoint® Mouse		31P7405		Optical 3-Button ScrollPoint Pro Mouse		31P8700	
• Adobe Reader		USB Optical Wheel Mouse		06P4069		Lenovo Laser Mouse (USB, PS/2)		41U3074		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>							
• Norton AntiVirus (OEM version)																	
• PC-Doctor™ (diagnostics)																	
• Multimedia Center for Think Offerings (CD-RW, combo)																	
• Sonic RecordNow and Drive Letter Access (CD-RW, combo)																	
• InterVideo WinDVD (combo)																	
<b>Downloadable</b>																	
• Software Delivery Assistant																	
• System Migration Assistant																	
• IBM Director Agent																	
<b>License - CD not included</b>																	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client																	

See footnotes for important warranty information  
US models announced October 18, 2005  
US models withdrawn effective November 2006

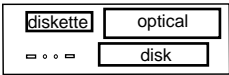
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(CL1-3) February 2007

# ThinkCentre® E50 Small Desktop (8773) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	L2 cache	Hyper-Threading	Memory <sup>6</sup>	Dis-kette	SATA disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Mo-dem	Pre-load	Limited warranty <sup>1</sup>	Avail date
E50	8773-AAU	4x3	Celeron® D336	2.80	256KB	512MB	None	80GB <sup>2</sup>	CD	SiS Mirage	661FX	10/100	No	XP Pro	1-year	Apr 06
E50	8773-33U	4x3	Pentium® 4 521	2.80	1MB	512MB	None	80GB	CD	SiS Mirage	661FX	10/100	No	XP Pro	1-year	Apr 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

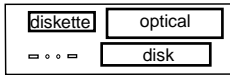
Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Celeron D Processor 336</b> with single-core, EM64T, Execute Disable Bit and 533MHz system bus or <b>Intel Pentium 4 Processor 521</b> with single-core, EM64T, Hyper-Threading (HT) technology, and Execute Disable Bit, and 800MHz system bus										<b>Small Desktop</b>			
L2 cache Implementation	<b>256KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color with silver accents</li> <li>• 13.0"W X 15.9"D X 4.3"H</li> <li>• 331mm W X 405mm D X 108mm H</li> <li>• 18 to 18.2lb (8.2 to 8.3kg)</li> </ul>		<ul style="list-style-type: none"> <li>• Bay ① 5.25", 1.6" high, access, std optical</li> <li>• Bay ② 3.5", 1" high, access, optional diskette</li> <li>• Bay ③ 3.5", 1" high, no access, std disk</li> </ul>	
Memory - std/max <sup>5</sup> Memory	<b>512MB std</b> / 2GB max Two 184-pin DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual-channel capable										<ul style="list-style-type: none"> <li>• Slot 1: Low Profile, 32-bit AGP 8X</li> <li>• Slot 2: Low Profile, 32-bit PCI 2.3</li> <li>• Slot 3: Low Profile, 32-bit PCI 2.3</li> <li>• Slot 4: Low Profile, 32-bit PCI 2.3</li> </ul>			
Graphics	<b>SiS® Mirage Graphic Engine (SiS Mirage)</b> / integrated graphics in north bridge / uses main memory (32 to 64MB) / 200MHz / one 15-pin analog D-sub connector / upgradable AGP 8X slot												<b>SECURITY</b>	
SATA disk controller	<b>80GB</b> / SATA300 7200 rpm Serial ATA / 150 MB/sec SATA150 / integrated in SiS964 southbridge												<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- No security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul>	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA connectors on planar													
EIDE controller	Enhanced IDE / ATA-133 / integrated in SiS964 south bridge													
EIDE cables	One 1-drop EIDE cable to optical / two EIDE connectors on planar													
EIDE CD	48X-20X <sup>4</sup> CD-ROM													
Diskette drive	None													
Chipset	<b>SiS 661FX chipset</b> / SiS661FX graphics memory controller in north bridge with AGP 8X support / SiS964 south bridge for SATA150 / ATA-100/133 EIDE, PCI 2.3 bus, USB, Low Pin Count Interface / ITE Tech® 8705GX Super I/O for serial, parallel, diskette, keyboard, and mouse												<ul style="list-style-type: none"> <li>• RoHS-compliant</li> <li>• DMI 2.0-compliant</li> </ul>	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)													
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]													
Audio	Integrated digital audio / AC '97 interface / Realtek® ALC655 codec													
Beeper	One internal beeper													
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot													
Modem	None													
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black													
Power supply	180 watts / universal / manual switch													
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>												<b>LIMITED WARRANTY<sup>1</sup></b>	
Microsoft® Windows® XP Professional	256MB PC3200 CL3 NP DDR1 UDIMM										73P2685		↪ <b>1-year parts and labor</b>	
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC3200 CL3 NP DDR1 UDIMM										73P2686		↪ <b>International Warranty Service<sup>8</sup></b>	
<b>Preloaded</b>	1GB PC3200 CL3 NP DDR1 UDIMM										22P9272		↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
• Rescue and Recovery™	160GB Serial ATA300 Disk (7200 rpm)										09N4254		↪ <b>Onsite service upgrade options (in eligible locations)<sup>7</sup></b>	
• Access Connections™	250GB Serial ATA300 Disk (7200 rpm)										41N3015		<ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul>	
• Client Security Solution™	Super Multi-Burner DL DVD±RW Drive										41N5581			
• ThinkVantage Productivity Center with Away Manager	USB Gemplus GemPC Smart Card Reader										41N3040			
• ThinkVantage System Update	USB 2.0 Lenovo Webcam										40Y8519			
• Symantec® Client Security™	USB 2.0 Memory Key 1GB										40Y7421			
• Diskeeper Lite	USB 2.0 CD-RW/DVD-ROM Combo II Drive										40Y8637			
• PC-Doctor™ (diagnostics)	USB 2.0 Portable 80GB Hard Disk										40Y8726			
• Adobe® Reader	E74 17" FST CRT Monitor (16.0" vis)(black)										63324CN			
• Google Toolbar	Lenovo L191 19" Monitor (black)										6135AB1			
• Google Desktop	Lenovo L192 Wide 19" Monitor (black)										6920AB1			
• Picasa from Google	ThinkVision® C170 17" (16.0" vis) (black)										6737P6N			
<b>License</b> - CD not included	ThinkVision L151 15" Monitor (black)										9205AB6			
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision L171p 17" Monitor (black)										9417HC2			
	ThinkVision L192p 19" Monitor (black)										9419HC2			
	ThinkVision L201p 20.1" Monitor (black)										9220HB1			
	PRO/1000T Desktop Adapter by Intel										22P6501			
	Preferred Pro USB Keyboard										73P5220			
	Optical 3-Button ScrollPoint® Mouse										31P7405			
	Optical 3-Button ScrollPoint Pro Mouse										31P8700			
	USB Optical Wheel Mouse										06P4069			
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>													

See footnotes for important warranty information  
US models announced April 25, 2006  
US models withdrawn effective December 2006

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(CL2-4) December 2006

# ThinkCentre® E50 Small Desktop (8778) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	GHz	L2 cache	EM64T	Memory <sup>8</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Mod-ern	Preload	Limited warranty <sup>1</sup>	Avail date
<b>E50</b>	8778-31U	3x3	Pentium®4 521	2.80	1MB	EM64T	512MB		80GB <sup>2</sup>	CD	GMA 950	945GZ	10/100	No	XP Pro	1-yr	May 06
<b>E50</b>	8778-D1U	3x3	Pentium 4 631	3.00	2MB	EM64T	512MB	Diskete	80GB	Combo	GMA 950	945GZ	10/100	No	XP Pro	1-yr	May 06
<b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b>																	
<b>Positioning Processor</b> <i>Essential business features, exceptional value</i> <b>Intel® Pentium 4 Processor 521 or 631</b> with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, and 800MHz system bus <b>L2 cache Implementation</b> <b>1MB</b> or <b>2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket <b>Memory - std/max<sup>8</sup> Memory</b> <b>512MB std / 2GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable <b>Graphics</b> <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display												<b>Small Desktop</b>  <ul style="list-style-type: none"> <li>• Business black color with silver accents</li> <li>• 13.0"W X 15.9"D X 4.3"H</li> <li>• 331mm W X 405mm D X 108mm H</li> <li>• 18 to 18.2lb (8.2 to 8.3kg)</li> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, optional diskette</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> <li>Slot 1: Low Profile, 32-bit PCI 2.3</li> <li>Slot 2: Low Profile, 32-bit PCI 2.3</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3</li> </ul>					
<b>SATA disk</b> <b>80GB</b> / SATA300 7200 rpm <b>SATA controller</b> Serial ATA / 300 MB/sec SATA300 / integrated in ICH7 <b>SATA cables</b> One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar <b>EIDE CD</b> <i>Some:</i> 48X/20X <sup>4</sup> CD-ROM <b>EIDE Combo</b> <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <b>EIDE controller</b> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) <b>EIDE cables</b> One 1-drop EIDE cable to optical / one EIDE connector on planar <b>Diskette drive</b> <i>Some:</i> 3.5" 1.44MB diskette drive												<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- No security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>- No keylock</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul>					
<b>Chipset</b> <b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, JX Express x1), PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F/JX Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls												<ul style="list-style-type: none"> <li>• RoHS-compliant</li> <li>• DMI 2.0-compliant</li> </ul>					
<b>Front ports</b> Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm) <b>Rear ports</b> Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) <b>Rear audio ports</b> Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm] <b>Audio</b> Integrated digital audio / AC '97 interface / Realtek® ALC655 codec <b>Beeper</b> One internal beeper <b>Ethernet</b> 10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot <b>Modem</b> None												ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>					
<b>Keyboard</b> 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black <b>Mouse</b> Optical Wheel Mouse (USB only), 400 dpi, black <b>Power supply</b> 180 watts / universal / manual switch												<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ <b>1-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul> ⇨ <b>Post-warranty maintenance services at</b> <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b>					
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Access Connections™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center with Away Manager</li> <li>• ThinkVantage System Update</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Google Toolbar</li> <li>• Google Desktop</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> </ul> <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client												<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 160GB Serial ATA300 Disk (7200 rpm) 09N4254 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 80GB Hard Disk 40Y8726 Lenovo L191 19" Monitor (black) 6135AB1 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® C170 17" (16.0" vis) (black) 6737P6N ThinkVision C190 19" (18.0" vis) (black) 6739P0N ThinkVision L151 15" Monitor (black) 9205AB6 ThinkVision L171p 17" Monitor (black) 9417HC2 ThinkVision L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 PRO/1000T Desktop Adapter by Intel 22P6501 Optical 3-Button ScrollPoint® Mouse 31P7405 Optical 3-Button ScrollPoint Pro Mouse 31P8700 USB Optical Wheel Mouse 06P4069 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>					

See footnotes for important warranty information  
US models announced April 25, 2006  
US models withdrawn effective December 2006

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(CL2-3) December 2006

# ThinkCentre® E50 Small Desktop (9217, 9218) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	GHz	L2 cache	EM64T Memory <sup>8</sup>	Dis-kette	EIDE disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Mo-dem	Pre-load	Limited warranty <sup>1</sup>	Avail date	
<b>E50</b>	9217-A1U	4x3	Celeron® 331	2.66	256KB	EM64T 256MB		40GB <sup>2</sup>	CD	SiS Mirage	661FX	10/100	No	XP Home	90-day	Oct 05	
<b>E50</b>	9217-11U	4x3	Pentium® 4 516	2.93	1MB	EM64T 256MB		40GB	CD	SiS Mirage	661FX	10/100	No	XP Home	90-day	Oct 05	
<b>E50</b>	9218-12U	4x3	Pentium 4 516	2.93	1MB	EM64T 512MB		40GB	CD	SiS Mirage	661FX	10/100	No	XP Pro	1-year	Oct 05	
<b>E50</b>	9218-D1U	4x3	Pentium 4 630	3.00	2MB	EM64T 512MB		80GB	Combo	SiS Mirage	661FX	10/100	No	XP Pro	1-year	Oct 05	
<b>E50</b>	9218-31U	4x3	Pentium 4 521	2.80	1MB	EM64T 256MB	Dsktte	80GB	CD	SiS Mirage	661FX	10/100	No	XP Pro	1-year	Mar 06	
Positioning	<i>Essential business features, exceptional value</i>										<b>Small Desktop</b>						
Processor	<b>Intel® Celeron D Processor 331 (2.66GHz)</b> with single core, EM64T, Execute Disable bit and 533MHz system bus or <b>Intel Pentium 4 Processor 516, 521, or 630</b> , with single core, EM64T, Hyper-Threading (HT) technology (521 and 630), and EIST (630 only), Execute Disable Bit (521 and 630), and 533MHz (516 only) or 800MHz (520 and 630) system bus										<ul style="list-style-type: none"> <li>• Business black color with silver accents</li> <li>• 12.8"W X 16.14"D X 4.21"H</li> <li>• 325mm W X 410mm D X 107mm H</li> <li>• 18 to 23lb (8.2 to 10.4kg)</li> </ul>		<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- No security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul>				
L2 cache Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, optional diskette Bay ③ 3.5", 1" high, no access, std disk						
Memory - std/max <sup>8</sup>	256 or 512MB std / 2GB max										Slot 1: Low Profile, 32-bit AGP 8X						
Memory	Two 184-pin DIMM sockets / one socket used / PC3200 400MHz DDR1 / non-parity / CAS latency 3 (CL3) / unbuffered / dual-channel capable										Slot 2: Low Profile, 32-bit PCI 2.3						
Graphics	<b>SiS® Mirage Graphic Engine (SiS Mirage)</b> / integrated graphics in north bridge / uses main memory (32 to 64MB) / 200MHz / one 15-pin analog D-sub connector / upgradable AGP 8X slot										Slot 3: Low Profile, 32-bit PCI 2.3						
EIDE disk	40, 80GB / ATA-100 7200 rpm										Slot 4: Low Profile, 32-bit PCI 2.3						
EIDE controller	Enhanced IDE / ATA-100 / integrated in SiS 964 south bridge																
EIDE cables	Two 1-drop EIDE cables to optical and disk / Two EIDE connectors on planar																
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM																
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo																
SATA controller	None / no SATA150 connectors on systemboard																
Diskette drive	Some: 3.5" 1.44MB diskette drive																
Chipset	<b>SiS 661FX chipset</b> / SiS661FX graphics memory controller in north bridge with AGP 8X support / SiS964L south bridge for ATA-100/133 EIDE, PCI 2.3 bus, USB, Low Pin Count Interface / ITE Tech® IT8712 Super I/O for serial, parallel, diskette, keyboard, and mouse																
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]																
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec																
Beeper	One internal beeper																
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot																
Modem	None																
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																
Power supply	180 watts / universal / manual switch																
<b>Preload with Windows XP Home<sup>5</sup></b>		<b>Accessories</b>															
Microsoft® Windows® XP Home Edition with Service Pack 2		256MB PC3200 CL3 NP DDR1 UDIMM		73P2685													
- Disk-to-Disk Recovery		512MB PC3200 CL3 NP DDR1 UDIMM		73P2686													
<b>Preload with Windows XP Professional</b>		1GB PC3200 CL3 NP DDR1 UDIMM		22P9272													
Microsoft Windows XP Professional with Service Pack 2		80GB EIDE Disk ATA-100 (7200 rpm)		09N4248													
- Disk-to-Disk Recovery		120GB EIDE Disk ATA-100 (7200 rpm)		09N4249													
<b>Preloaded (all)</b>		Super Multi-Burner DL DVD±RW Drive		41N5581													
• Rescue and Recovery™		USB 2.0/Analog Headset by Sennheiser		40Y8518													
• Access Program		USB 2.0 Lenovo Webcam		40Y8519													
• Adobe Reader		USB 2.0 Memory Key 1GB		40Y7421													
• Norton AntiVirus (OEM version)		USB 2.0 CD-RW/DVD-ROM Combo II Drive		40Y8637													
• PC-Doctor™ (diagnostics)		USB 2.0 Portable Multi-Burner Drive		22P9163													
• Multimedia Center for Think Offerings (CD-RW, combo)		USB 2.0 Portable 80GB Hard Disk		40Y8726													
• Sonic RecordNow and Drive Letter Access (CD-RW, combo)		USB 2.0 Super Multi-Burner Drive		41N5565													
• InterVideo WinDVD (combo)		Lenovo L171 17" Monitor (black)		9227AC1													
<b>License</b> - CD not included (all)		Lenovo L191 19" Monitor (black)		6135AB1													
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)		Lenovo D221 Wide 22" Monitor (black)		6622HB2													
		ThinkVision® L171p 17" Monitor (black)		9417HC2													
		ThinkVision L192p 19" Monitor (black)		9419HC2													
		ThinkVision L201p 20.1" Monitor (black)		9220HB1													
		Lenovo M500 Projector		0037A05													
		Lenovo C500 Projector		0039A05													
		PRO/1000T Desktop Adapter by Intel		22P6501													
		Optical 3-Button ScrollPoint® Mouse		31P7405													
		Optical 3-Button ScrollPoint Pro Mouse		31P8700													
		Lenovo Laser Mouse (USB, PS/2)		41U3074													
		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>															
<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ 9217: 90-day parts and labor ⇨ 9218: 1-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations) <sup>7</sup> : <ul style="list-style-type: none"> <li>• 9217: 1-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41E9799)</li> <li>• 9217: 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41E9800)</li> <li>• 9218: 1-year LOR 9x5, 4 hr response (ThinkPlus part number 41C9189)</li> <li>• 9218: 2-year LOR 9x5, 4 hr response (ThinkPlus part number 41C9190)</li> <li>• 9218: 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 9218: 3-year LOR 9x5, 4 hr response (ThinkPlus part number 41C9191)</li> <li>• 9218: 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> ⇨ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup> via 800-IBM-SERV (426-7378)																	

See footnotes for important warranty information  
US models announced October 18, 2005 or February 21, 2006  
US models withdrawn effective November 2006

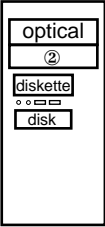
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(CL1-4) February 2007

# ThinkCentre® E50 Tower (8291) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	L2 GHz cache	EM64T	Memory	Diskette drive	SATA disk	EIDE optical	Graphics	PCI ethernet	Mo-dem	FireWire adapter	Pre-Load	Limited warranty <sup>12</sup>	Avail date
E50	8291-41U	3x4	Pentium® 4 531	3.00	1MB	EM64T 512MB	None	40GB <sup>2</sup>	CD	GMA 900	10/100	No		XP Pro	1-yr	Oct 05
E50	8291-D1U	3x4	Pentium 4 630	3.00	2MB	EM64T 512MB	None	80GB	CD-RW	GMA 900	10/100	No		XP Pro	1-yr	Oct 05
E50	8291-E1U	3x4	Pentium 4 640	3.20	2MB	EM64T 512MB	None	80GB	Combo	GMA 900	10/100	No		XP Pro	1-yr	Oct 05
E50	8291-E2U	3x4	Pentium 4 640	3.20	2MB	EM64T 512MB	None	160GB	DVD±RW <sup>6</sup>	GMA 900	10/100	No		XP Pro	1-yr	Oct 05
E50	8291-01U	3x4	Pentium 4 640	3.20	2MB	EM64T 1GB	None	160GB	Combo	GMA 900	10/100	No	1394	XP Pro	1-yr	Jan 06
E50	8291-02U	3x4	Celeron® D 336	2.80	256K	EM64T 512MB	None	80GB	Combo	GMA 900	10/100	Modem		XP Home	1-yr	Mar 06
E50	8291-03U	3x4	Pentium 4 521	2.80	1MB	EM64T 512MB	None	160GB	Combo	GMA 900	10/100	Modem		XP Home	1-yr	Mar 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning	<i>Essential business features, exceptional value</i>										<b>Tower</b>		
Processor	Intel® Celeron D Processor 336 with single core, EM64T, Execute Disable Bit, and 533MHz bus or Intel Pentium 4 Processor 521, 531, 630, or 640 with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, and 800MHz system bus / 630 and 640 have EIST										<ul style="list-style-type: none"> <li>Business black color with silver accents</li> <li>7.09"W X 18.03" D X 14.72"H</li> <li>180mm W X 458mm D X 374mm H</li> <li>20.01 to 20.3 lb (9.1 to 9.2 kg)</li> <li>Handle on top front</li> <li>Thumbscrew for removal of side covers</li> <li>Toolless entry</li> </ul>		
L2 cache Implementation	256KB, 1MB, or 2MB std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, optional diskette</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>		
Memory - std/max <sup>8</sup>	512MB or 1GB std / 4GB max										<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, 32-bit PCI 2.3 - used*</li> <li>Slot 2: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> </ul>		
Memory	Four 240-pin DIMM sockets / model 01U: two sockets used (512MB per socket); other models: one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable										*FireWire or modem adapter in slot on some models		
Graphics	Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector										<b>SECURITY</b>		
SATA disk	40, 80, or 160GB / SATA150 7200 rpm										<ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>No security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> </ul>		
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6										<ul style="list-style-type: none"> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul>		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar										<ul style="list-style-type: none"> <li>DMI 2.0-compliant</li> </ul>		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM										<p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p>		
EIDE CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW										<b>LIMITED WARRANTY<sup>1</sup></b>		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo										<ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> </ul>		
EIDE DVD±RW	Some: DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)										<ul style="list-style-type: none"> <li>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)												
EIDE cables	One 2-drop EIDE cable to optical / one EIDE connector on planar												
Diskette drive	None												
Chipset	Intel 915GV Express Chipset / 82915GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls												
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]												
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec												
Beeper	One internal beeper												
IEEE 1394	Some: FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, one 6-pin port on front of system, no external cables included												
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot												
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter												
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black												
Power supply	250 watts / universal / manual switch												
<b>Preload with Windows XP Home<sup>5</sup></b>		<b>Accessories</b>											
Microsoft® Windows® XP Home Edition		256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970											
- Disk-to-Disk Recovery		512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971											
<b>Preload with Windows XP Professional<sup>5</sup></b>		1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972											
Microsoft Windows XP Professional		160GB Serial ATA300 Disk (7200 rpm) 09N4254											
- Disk-to-Disk Recovery		250GB Serial ATA300 Disk (7200 rpm) 41N3015											
<b>Preloaded</b> (all; only some listed)		Super Multi-Burner DL DVD±RW Drive 41N5581											
• Rescue and Recovery™		USB Gemplus GemPC Smart Card Reader 41N3040											
• Norton AntiVirus (OEM version)		USB 2.0 Memory Key 1GB 40Y7421											
• PC-Doctor™ (diagnostics)		USB 2.0/Analog Headset by Sennheiser 40Y8518											
• Multimedia Center for Think Offerings (CD-RW, combo, DVD±RW)		USB 2.0 Lenovo Webcam 40Y8519											
• Sonic RecordNow and Drive Letter Access (CD-RW, combo, DVD±RW)		USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637											
• InterVideo WinDVD (combo, DVD±RW)		USB 2.0 Portable 80GB Hard Disk 40Y8726											
• InterVideo WinDVD Creator (DVD±RW)		USB 2.0 Super Multi-Burner Drive 41N5565											
<b>License</b> - CD not included		Lenovo L191 19" Monitor (black) 6135AB1											
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		Lenovo D221 Wide 22" Monitor (black) 6622HB2											
		ThinkVision® L171p 17" Monitor (black) 9417HC2											
		ThinkVision L192p 19" Monitor (black) 9419HC2											
		ThinkVision L201p 20.1" Monitor (black) 9220HB1											
		PRO/1000T Desktop Adapter by Intel 22P6501											
		Lenovo Laser Mouse (USB, PS/2) 41U3074											
		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>											

See footnotes for important warranty information  
US models announced October 18, 2005, January 24, 2006, or February 27, 2006  
US models withdrawn effective November 2006

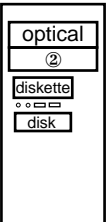
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(CL1-1) February 2007

# ThinkCentre® E50 Tower (8771) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	L2 cache	Hyper-Threading	Memory <sup>6</sup>	Disk-ette	SATA disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Mo-dem	Pre-load	Limited warranty <sup>1</sup>	Avail date
E50 8771-ACU	4x4	Celeron® D 336	2.80	256KB		512MB	None	80GB <sup>2</sup>	CD	SiS Mirage	661FX	10/100	No XP	Pro	1-year	Apr 06
E50 8771-24U	4x4	Pentium® 4 521	2.80	1MB	HT	512MB	None	80GB	CD-RW	SiS Mirage	661FX	10/100	No XP	Pro	1-year	Apr 06
E50 8771-33U	4x4	Pentium 4 521	2.80	1MB	HT	512MB	None	80GB	CD	SiS Mirage	661FX	10/100	No XP	Pro	1-year	Apr 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Celeron D Processor 336</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus or <b>Intel Pentium 4 Processor 521</b> with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, and 800MHz system bus										<b>Tower</b>																																																	
L2 cache Implementation	<b>256KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										<ul style="list-style-type: none"> <li>Business black color with silver accents</li> <li>7.1"W X 17.5" D X 15.4"H</li> <li>180mm W X 445mm D X 392mm H</li> <li>20.01 to 20.3 lb (9.1 to 9.2 kg)</li> <li>Handle on top front</li> <li>Thumbscrew for removal of side covers</li> <li>Toolless entry</li> </ul>																																																	
Memory - std/max <sup>8</sup> Memory	<b>512MB std</b> / 2GB max Two 184-pin DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual-channel capable										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, std disk																																																	
Graphics	<b>SiS® Mirage Graphic Engine (SiS Mirage)</b> / integrated graphics in north bridge / uses main memory (32 to 64MB) / 200MHz / one 15-pin analog D-sub connector / upgradable AGP 8X slot										Slot 1: half-length, full-height, 32-bit AGP 8X Slot 2: half-length, full-height, 32-bit PCI 2.3 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																																																	
SATA disk	<b>80GB</b> / SATA300 / 7200 rpm										<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>No security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul>																																																	
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in SiS964																																																											
SATA cables	One SATA cable (one 1-drop to disk) / two SATA connectors on planar																																																											
EIDE controller	Enhanced IDE / ATA-133 / integrated in SiS964 south bridge																																																											
EIDE cables	One 2-drop EIDE cable to optical / two EIDE connectors on planar																																																											
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM										<ul style="list-style-type: none"> <li>RoHS-compliant</li> <li>DMI 2.0-compliant</li> </ul> ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>																																																	
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW																																																											
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo																																																											
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)																																																											
Diskette drive	None																																																											
Chipset	<b>SiS661FX chipset</b> / SiS661FX graphics memory controller in north bridge with AGP 8X support / SiS964 south bridge for SATA150 / ATA-100/133 EIDE, PCI 2.3 bus, USB, Low Pin Count Interface / ITE Tech® 8705GX Super I/O for serial, parallel, diskette, keyboard, and mouse										<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 1-year parts and labor</li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↔ <b>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>																																																	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)																																																											
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																																																											
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]																																																											
Audio	Integrated digital audio / AC '97 interface / Realtek® ALC655 codec																																																											
Beeper	One internal beeper										Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)																																																	
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot																																																											
Modem	None																																																											
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																																																											
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																																																											
Power supply	250 watts / universal / manual switch										<b>Accessories</b> <table border="0"> <tr><td>256MB PC3200 CL3 NP DDR1 UDIMM</td><td>73P2685</td></tr> <tr><td>512MB PC3200 CL3 NP DDR1 UDIMM</td><td>73P2686</td></tr> <tr><td>1GB PC3200 CL3 NP DDR1 UDIMM</td><td>22P9272</td></tr> <tr><td>160GB Serial ATA300 Disk (7200 rpm)</td><td>09N4254</td></tr> <tr><td>250GB Serial ATA300 Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>Super Multi-Burner DL DVD±RW Drive</td><td>41N5581</td></tr> <tr><td>USB Gemplus GemPC Smart Card Reader</td><td>41N3040</td></tr> <tr><td>USB 2.0/Analog Headset by Sennheiser</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Memory Key 1GB</td><td>40Y7421</td></tr> <tr><td>USB 2.0 CD-RW/DVD-ROM Combo II Drive</td><td>40Y8637</td></tr> <tr><td>USB 2.0 Portable 80GB Hard Disk</td><td>40Y8726</td></tr> <tr><td>Lenovo L191 19" Monitor (black)</td><td>6135AB1</td></tr> <tr><td>ThinkVision® C170 17" (16.0" vis) (black)</td><td>6737P6N</td></tr> <tr><td>ThinkVision L151 15" Monitor (black)</td><td>9205AB6</td></tr> <tr><td>ThinkVision L171p 17" Monitor (black)</td><td>9417HC2</td></tr> <tr><td>ThinkVision L192p 19" Monitor (black)</td><td>9419HC2</td></tr> <tr><td>ThinkVision L201p 20.1" Monitor (black)</td><td>9220HB1</td></tr> <tr><td>ThinkVision C400 Wireless Projector</td><td>0039WA1</td></tr> <tr><td>PRO/1000T Desktop Adapter by Intel</td><td>22P6501</td></tr> <tr><td>Preferred Pro USB Keyboard</td><td>73P5220</td></tr> <tr><td>Optical 3-Button ScrollPoint® Mouse</td><td>31P7405</td></tr> <tr><td>Optical 3-Button ScrollPoint Pro Mouse</td><td>31P8700</td></tr> <tr><td>USB Optical Wheel Mouse</td><td>06P4069</td></tr> </table> Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		256MB PC3200 CL3 NP DDR1 UDIMM	73P2685	512MB PC3200 CL3 NP DDR1 UDIMM	73P2686	1GB PC3200 CL3 NP DDR1 UDIMM	22P9272	160GB Serial ATA300 Disk (7200 rpm)	09N4254	250GB Serial ATA300 Disk (7200 rpm)	41N3015	Super Multi-Burner DL DVD±RW Drive	41N5581	USB Gemplus GemPC Smart Card Reader	41N3040	USB 2.0/Analog Headset by Sennheiser	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Memory Key 1GB	40Y7421	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	USB 2.0 Portable 80GB Hard Disk	40Y8726	Lenovo L191 19" Monitor (black)	6135AB1	ThinkVision® C170 17" (16.0" vis) (black)	6737P6N	ThinkVision L151 15" Monitor (black)	9205AB6	ThinkVision L171p 17" Monitor (black)	9417HC2	ThinkVision L192p 19" Monitor (black)	9419HC2	ThinkVision L201p 20.1" Monitor (black)	9220HB1	ThinkVision C400 Wireless Projector	0039WA1	PRO/1000T Desktop Adapter by Intel	22P6501	Preferred Pro USB Keyboard	73P5220	Optical 3-Button ScrollPoint® Mouse	31P7405	Optical 3-Button ScrollPoint Pro Mouse	31P8700	USB Optical Wheel Mouse	06P4069
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License - CD not included	<ul style="list-style-type: none"> <li>Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</li> </ul>																																																											

See footnotes for important warranty information  
US models announced April 25, 2006  
US models withdrawn effective December 2006

# ThinkCentre® E50 Tower (8776) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	L2 GHz cache	EM64T	Memory	Diskette drive	SATA disk	EIDE optical	Graphics	PCI ethernet	Mo-dem	FireWire adapter	Pre-Load	Limited warranty <sup>12</sup>	Avail date
E50	8776-31U	4x4	Pentium® 4 521	2.80	1MB	EM64T 512MB	None	80GB <sup>2</sup>	CD	GMA 950	10/100	No		XP Pro	1-yr	May 06
E50	8776-D1U	4x4	Pentium 4 630	3.00	2MB	EM64T 512MB	None	80GB	CD-RW	GMA 950	10/100	No		XP Pro	1-yr	May 06
E50	8776-E1U	4x4	Pentium 4 640	3.20	2MB	EM64T 1GB	None	160GB	Combo	GMA 950	10/100	No	1394	XP Pro	1-yr	May 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium 4 Processor 521, 630 or 640</b> with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, and 800MHz system bus / 630 and 640 have EIST	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color with silver accents</li> <li>7.1"W X 17.5" D X 15.4"H</li> <li>180mm W X 445mm D X 392mm H</li> <li>20.01 to 20.3 lb (9.1 to 9.2 kg)</li> <li>Handle on top front</li> <li>Thumbscrew for removal of side covers</li> <li>Toolless entry</li> </ul>	
L2 cache Implementation	<b>1MB</b> or <b>2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>8</sup> Memory	<b>512MB</b> / 4GB max Four 240-pin DIMM sockets / <i>model E1U</i> : two sockets used (512MB per socket); <i>other models</i> : one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, 32-bit PCI 2.3 - used* Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3 *FireWire adapter in slot on some models	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G / 400MHz		
SATA disk	<b>80</b> or <b>160GB</b> / SATA300 7200 rpm		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar		
EIDE CD	<i>Some</i> : 48X-20X <sup>4</sup> CD-ROM		
EIDE CD-RW	<i>Some</i> : 48X/32X/48X Max <sup>4</sup> CD-RW		
EIDE Combo	<i>Some</i> : 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one EIDE connector on planar		
Diskette drive	None		
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x16, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F/JX Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]		
Audio	Integrated digital audio / AC '97 interface / Realtek® ALC655 codec		
Beeper	One internal beeper		
IEEE 1394	<i>Some</i> : FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, one 6-pin port on front of system, no external cables included		
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot		
Modem	None		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	250 watts / universal / manual switch		
			<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>No security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul>
			<ul style="list-style-type: none"> <li>RoHS-compliant</li> <li>DMI 2.0-compliant</li> </ul>
			ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b>	<b>LIMITED WARRANTY<sup>1</sup></b>
<b>Preloaded</b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Access Connections™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center with Away Manager</li> <li>ThinkVantage System Update</li> <li>Symantec® Client Security™</li> <li>Diskeeper Lite</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Google Toolbar</li> <li>Google Desktop</li> <li>Picasa from Google</li> <li>Multimedia Center for Think Offerings (CD-RW, combo)</li> <li>Sonic RecordNow and Drive Letter Access (CD-RW, combo)</li> </ul>	<ul style="list-style-type: none"> <li>256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970</li> <li>512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971</li> <li>1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972</li> <li>160GB Serial ATA300 Disk (7200 rpm) 09N4254</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Super Multi-Burner DL DVD±RW Drive 41N5581</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Portable 80GB Hard Disk 40Y8726</li> <li>Maxtor One Touch II 300GB USB 2.0 Drive 22P8884</li> <li>Lenovo L191 19" Monitor (black) 6135AB1</li> <li>ThinkVision® C170 17" (16.0" vis) (black) 6737P6N</li> <li>ThinkVision L171p 17" Monitor (black) 9417HC2</li> <li>ThinkVision L192p 19" Monitor (black) 9419HC2</li> <li>ThinkVision L201p 20.1" Monitor (black) 9220HB1</li> <li>Lenovo M500 Projector 0037A05</li> <li>ThinkVision C400 Wireless Projector 0039WA1</li> <li>PRO/1000T Desktop Adapter by Intel 22P6501</li> <li>Optical 3-Button ScrollPoint Pro Mouse 31P8700</li> <li>DVI-I PCIe Connection Adapter (ADD2) 73P2516</li> <li>NVIDIA® GeForce 6200 64MB Dual Head 73P2517</li> <li>ATI® RADEON® X300 SE 128MB Dual Head 41U4813</li> <li>ATI RADEON X700 128MB Dual Head 73P2518</li> <li>Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></li> </ul>	<ul style="list-style-type: none"> <li>⇒ 1-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>⇒ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>

See footnotes for important warranty information  
US models announced April 25, 2006  
US models withdrawn effective December 2006

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(CL2-2) December 2006



# ThinkCentre® E50 Tower (9214, 9215) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-mod	Slot x bay	Processor	GHz	L2 cache	EM64T	Memory <sup>8</sup>	Dis-kette	EIDE disk	EIDE optical	Graphics	Chip-set	PCI ethernet	Mo-dem	Pre-load	Limited warranty <sup>1</sup>	Avail date
E50	9214-A1U	4x4	Celeron® 331	2.66	256KB	EM64T	256MB	None	40GB <sup>2</sup>	CD	SiS Mirage 661FX	10/100	No	Home	90-day	Oct 05	
E50	9214-11U	4x4	Pentium® 4 516	2.93	1MB	EM64T	256MB	None	40GB	CD	SiS Mirage 661FX	10/100	No	Home	90-day	Oct 05	
E50	9215-A1U	4x4	Celeron 331	2.66	256KB	EM64T	256MB	None	40GB	CD	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-21U	4x4	Pentium 4 516	2.93	1MB	EM64T	256MB	None	40GB	CD	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-24U	4x4	Pentium 4 519K	3.06	1MB	EM64T	512MB	None	40GB	CD	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-25U	4x4	Pentium 4 519K	3.06	1MB	EM64T	512MB	None	80GB	CD-RW	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-D2U	4x4	Pentium 4 630	3.00	2MB	EM64T	512MB	None	80GB	Combo	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-D3U	4x4	Pentium 4 630	3.00	2MB	EM64T	512MB	None	120GB	DVD±RW <sup>6</sup>	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-E1U	4x4	Pentium 4 640	3.20	2MB	EM64T	512MB	None	80GB	Combo	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Oct 05	
E50	9215-36U	4x4	Pentium 4 521	2.80	1MB	EM64T	256MB	None	80GB	CD	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Mar06	
E50	9215-38U	4x4	Pentium 4 521	2.80	1MB	EM64T	512MB	None	80GB	Combo	SiS Mirage 661FX	10/100	No	XP Pro	1-year	Mar06	

Positioning	<i>Essential business features, exceptional value</i>	<b>Tower</b>
Processor	<b>Intel® Celeron D Processor 331 (2.66GHz)</b> with single core, EM64T, Execute Disable Bit and 533MHz system bus or <b>Intel Pentium 4 Processor 516, 519K, 521, 630, 640</b> with single core, EM64T, Hyper-Threading technology (521 and 6xx), EIST (6xx only), Execute Disable Bit (except 516), and 533 or 800MHz (521 and 6xx) system bus	<ul style="list-style-type: none"> <li>Business black color with silver accents</li> <li>7.09"W X 18.03" D X 14.72"H</li> <li>180mm W X 458mm D X 374mm H</li> <li>20.01 to 20.3 lb (9.1 to 9.2 kg)</li> <li>Handle on top front</li> <li>Thumbscrew for removal of side covers</li> <li>Toolless entry</li> </ul>
L2 cache Implementation	<b>256KB, 1MB, or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	
Memory - std/max <sup>8</sup> Memory	<b>256 or 512MB std</b> / 2GB max Two 184-pin DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual-channel capable	<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, optional diskette</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>
Graphics	<b>SiS® Mirage Graphic Engine (SiS Mirage)</b> / integrated graphics in north bridge / uses main memory (32 to 64MB) / 200MHz / one 15-pin analog D-sub connector / upgradable AGP 8X slot	<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, 32-bit AGP 8X</li> <li>Slot 2: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>
EIDE disk	<b>40, 80, or 120GB</b> / ATA-100 7200 rpm	<p align="center"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>No security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul> <p align="center"><b>LIMITED WARRANTY<sup>1</sup></b></p> <p>↪ 9214: <b>90-day parts and labor</b></p> <p>↪ 9215: <b>1-year parts and labor</b></p> <p>↪ <b>International Warranty Service<sup>9</sup></b></p> <p>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></p> <p>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>9214: <b>1-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41E9799)</li> <li>9214: <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41E9800)</li> <li>9215: <b>1-year LOR 9x5, 4 hr response</b> (ThinkPlus part number 41C9189)</li> <li>9215: <b>2-year LOR 9x5, 4 hr response</b> (ThinkPlus part number 41C9190)</li> <li>9215: <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>9215: <b>3-year LOR 9x5, 4 hr response</b> (ThinkPlus part number 41C9191)</li> <li>9215: <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul> <p>↪ <b>Post-warranty maintenance services at lenovo.com/thinkplus/warranty</b></p> <p>↪ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></p>
EIDE controller	Enhanced IDE / ATA-133 / integrated in SiS 964 south bridge	
EIDE cables	Two 1-drop EIDE cables to optical and disk / Two EIDE connectors on planar	
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM	
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)	
SATA controller	None / no SATA150 connectors on systemboard	
Diskette drive	None	
Chipset	<b>SiS 661FX chipset</b> / SiS661FX graphics memory controller in north bridge with AGP 8X support / SiS964L south bridge for ATA-100/133 EIDE, PCI 2.3 bus, USB, Low Pin Count Interface / ITE Tech® IT8712 Super I/O for serial, parallel, diskette, keyboard, and mouse	
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]	
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec	
Beeper	One internal beeper	
Ethernet	10/100 ethernet on systemboard / Realtek 8100C controller (MAC/PHY) / PCI 2.3 / Wake on LAN® / PXE 2.0 and RPL remote boot	
Modem	None	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Power supply	250 watts / universal / manual switch	

	Accessories	
<b>Preload with Windows XP Home<sup>5</sup></b>		
Microsoft® Windows® XP Home Edition with Service Pack 2	256MB PC3200 CL3 NP DDR1 UDIMM	73P2685
- Disk-to-Disk Recovery	512MB PC3200 CL3 NP DDR1 UDIMM	73P2686
<b>Preload with Windows XP Professional</b>	1GB PC3200 CL3 NP DDR1 UDIMM	22P9272
Microsoft Windows XP Professional with Service Pack 2	80GB EIDE Disk ATA-100 (7200 rpm)	09N4248
- Disk-to-Disk Recovery	120GB EIDE Disk ATA-100 (7200 rpm)	09N4249
<b>Preloaded</b> (all; only some listed)	Super Multi-Burner DL DVD±RW Drive	41N5581
• Rescue and Recovery™	USB Gemplus GemPC Smart Card Reader	41N3040
• Access Program	USB 2.0 Lenovo Webcam	40Y8519
• Norton AntiVirus (OEM version)	USB 2.0 Memory Key 1GB	40Y7421
• PC-Doctor™ (diagnostics)	USB 2.0/Analog Headset by Sennheiser	40Y8518
• Multimedia Center for Think Offerings (CD-RW, combo, DVD±RW)	USB 2.0 Lenovo Webcam	40Y8519
• Sonic RecordNow and Drive Letter Access (CD-RW, combo, DVD±RW)	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637
• InterVideo WinDVD (combo, DVD±RW)	USB 2.0 Portable 80GB Hard Disk	40Y8726
• InterVideo WinDVD Creator (DVD±RW)	USB 2.0 Super Multi-Burner Drive	41N5565
<b>License</b> - CD not included (all)	Lenovo L171 17" Monitor (black)	9227AC1
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	Lenovo L191 19" Monitor (black)	6135AB1
	Lenovo D221 Wide 22" Monitor (black)	6622HB2
	ThinkVision® L171p 17" Monitor (black)	9417HC2
	ThinkVision L192p 19" Monitor (black)	9419HC2
	ThinkVision L201p 20.1" Monitor (black)	9220HB1
	Optical 3-Button ScrollPoint® Mouse	31P7405
	Lenovo Laser Mouse (USB, PS/2)	41U3074
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

See footnotes for important warranty information  
US models announced October 18, 2005 or February 21, 2006  
US models withdrawn effective November 2006

**Partial list of accessories supported on ThinkCentre E50 originally announced on October 18, 2005**

**Memory**

*SiS chipset types 9214, 9215, 9217, 9218 only:*  
256MB PC3200 CL3 NP DDR1 UDIMM 73P2685  
512MB PC3200 CL3 NP DDR1 UDIMM 73P2686  
1GB PC3200 CL3 NP DDR1 UDIMM 22P9272

*Intel chipset types 8291, 8294 only:*  
256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 *ann 04/19/05*  
512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 *ann 04/19/05*  
1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 *ann 04/19/05*

**Optical**

48X-20X IDE CD-ROM (black) 10K3782  
16X Max<sup>4</sup> DVD-ROM (black) 22P6950  
48X/32X/48X Max<sup>4</sup> CD-RW (black) 22P7042  
48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300 *ann 04/06/04*  
Super Multi-Burner DL DVD±RW Drive 41N5581 *ann 05/30/06*

**Storage and removable storage**

*SiS chipset types 9214, 9215, 9217, 9218 only:*  
40GB EIDE Disk ATA-100 (7200 rpm) 22P7157  
80GB EIDE Disk ATA-100 (7200 rpm) 09N4248  
120GB EIDE Disk ATA-100 (7200 rpm) 09N4249

*Intel chipset types 8291, 8294, 8776, 8778 and SiS chipset types 8771, 8773 only:*  
40GB Serial ATA150 Disk (7200 rpm) 22P7185  
80GB Serial ATA300 Disk (7200 rpm) 09N4253  
160GB Serial ATA300 Disk (7200 rpm) 09N4254  
250GB Serial ATA300 Disk (7200 rpm) 41N3015 *ann 01/24/06*

*All:*  
USB Portable Diskette Drive 05K9276 *ann 06/05/00*  
USB 2.0 Memory Key 256MB 40Y8594 *ann 03/21/06*  
USB 2.0 Memory Key 512MB 40Y8596 *ann 03/21/06*  
USB 2.0 Memory Key 1GB 40Y7421 *ann 12/13/05*  
USB 2.0 Essential Memory Key 1GB 41U4940 *ann 01/23/07*  
USB 2.0 Essential Memory Key 2GB 41U4944 *ann 01/23/07*  
USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637  
USB 2.0 Portable 80GB Hard Disk 40Y8726 *ann 07/19/05*  
USB 2.0 Super Multi-Burner Drive 41N5565 *ann 01/23/07*

**Graphics**

*8776 Tower with Intel 945G chipset only:*  
DVI-I PCIe Connection Adapter (ADD2) 73P2516  
ATI® RADEON® X300 SE 128MB Dual Head 41U4813 *ann 10/24/06*  
ATI RADEON X700 128MB Dual Head 73P2518 *ann 06/28/05*

**Keyboard**

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*  
Preferred Pro Full Size PS/2 Keyboard 31P7415 *ann 06/04/02*  
Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*

**Mouse**

USB Optical Wheel Mouse 06P4069  
Optical 3-Button ScrollPoint® Mouse 31P7405  
Optical 3-Button ScrollPoint Pro Mouse 31P8700  
Lenovo Laser Mouse (USB, PS/2) 41U3074 *ann 01/23/07*

**Multimedia**

USB 2.0/Analog Headset by Sennheiser 40Y8518 *ann 06/27/06*  
USB 2.0 Lenovo Webcam 40Y8519 *ann 08/29/06*

**Power and Cables**

Belkin 7-Outlet Surge Protector 31P7657

**Data/Video Projectors**

ThinkVision® E500 Projector 0038A05 *ann 07/19/05*  
Lenovo M500 Projector 0037A05 *ann 02/28/06*  
Lenovo C500 Projector 0039A05 *ann 07/11/06*  
ThinkVision C400 Wireless Projector 0039WA1 *ann 09/20/05*

**Security**

USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*  
USB Fingerprint Reader 41U3167 *ann 10/24/06*

**Monitors**

Lenovo E75 17" CRT Monitor (16.0" vis) blk 6307BTN *ann 01/16/07*  
Lenovo L151 15" Monitor (black) 9165AB6 *ann 02/28/06*  
Lenovo L171 17" Monitor (black) 9227AC1 *ann 11/07/06*  
Lenovo L191 19" Monitor (black) 6135AB1 *ann 06/27/06*  
Lenovo L192 Wide 19" Monitor (black) 6920AB1 *ann 09/19/06*  
Lenovo D221 Wide 22" Monitor (black) 6622HB1 *ann 11/21/06*  
ThinkVision L171p 17" Monitor (black) 9417HC2 *ann 10/31/06*  
ThinkVision L192p 19" Monitor (black) 9419HC2 *ann 10/31/06*  
ThinkVision L201p 20.1" Monitor (black) 9220HB1 *ann 10/31/06*

**Monitor Accessories<sup>46</sup>**

ThinkVision Sound Bar 40Y7616 *ann 08/23/05*  
Kensington® MicroSaver® Security Cable Lock 73P2582  
Radial Arm 19K4464 *ann 05/05/00*

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

Other accessories at [lenovo.com/accessories](http://lenovo.com/accessories)

Need to buy accessories no longer marketed by Lenovo? See [www.itxchange.com/lenovo](http://www.itxchange.com/lenovo) for the Options Continuation Program.

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	EIDE Memory <sup>a</sup>	EIDE disk	EIDE optical	Graphics	Security chip	Ethernet	Preload	Workhorse Global, Educ	Avail date
M50	8187-34U	4x4	Pentium® 4	2.8E	1MB	800	HT	256MB	40GB <sup>2</sup>	CD	Extreme™ 2 GMCH		10/100	XP Pro <sup>5</sup>	No	Feb 2004
M50	8187-37U	4x4	Pentium 4	2.8E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH		Gigabit	XP Pro	No	Feb 2004
M50	8187-38U	4x4	Pentium 4	2.8C	512K	800	HT	512MB	40GB	CD	Extreme 2 GMCH		Gigabit	XP Pro	<b>Educ</b>	Mar 2004
M50	8187-43U	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH		Gigabit	XP Pro	W/G	Feb 2004
M50	8187-44U	4x4	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD	Extreme 2 GMCH		10/100	XP Pro	No	Feb 2004
M50	8187-47U	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH	Chip	Gigabit	XP Pro	No	Feb 2004
M50	8187-48U	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD-RW	Extreme 2 GMCH		Gigabit	XP Pro	No	Feb 2004
M50	8187-49U	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH		Gigabit	XP Pro	<b>Educ</b>	Feb 2004
M50	8187-3BU	4x4	Pentium 4	2.8A	1MB	533		512MB	40GB	CD	Extreme 2 GMCH		Gigabit	XP Pro	No	Aug 2004
M50	8187-3CU	4x4	Pentium 4	2.8A	1MB	533		256MB	40GB	CD	Extreme 2 GMCH		10/100	XP Pro	No	Aug 2004
M50	8187-4BU	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	DVD	Extreme 2 GMCH		Gigabit	XP Pro	No	Aug 2004

Positioning *Stability and manageability for the enterprise*  
 Processor **Intel® Pentium 4 at 2.8 or 3.0GHz** with 533 or 800MHz system bus  
 Hyper-Threading *Some: Hyper-Threading (HT) technology*  
 L2 cache **512KB or 1MB** std and max / ECC / full speed  
 Implementation Processor and L2 cache in FC-PGA2 in mPGA478B socket

Memory - std/max<sup>a</sup> **256 or 512MB std / 4GB max**  
 Memory Four 184-pin gold plated DIMM sockets / one socket used (two used on F4U) / **PC2700 333MHz DDR1** / non-parity / ind std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable

Graphics **Integrated Intel Extreme™ Graphics 2** / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVM T / one 15-pin analog D-sub connector

EIDE disk **40GB**, ATA-100, 7200 rpm, rubber vibration dampening mounts  
 EIDE controller Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)  
 EIDE cables Two EIDE 80-conductor cables (one 2-drop cable to optical, one 1-drop cable to disk) / two EIDE connectors on systemboard  
 CD *Some: 48X-20X<sup>4</sup> CD-ROM / EIDE*  
 DVD *Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE*  
 CD-RW *Some: 48X/32X/48X Max<sup>4</sup> CD-RW / EIDE*  
 SATA controller Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5  
 SATA cables No SATA cables / two SATA connectors on systemboard  
 Diskette drive 3.5" 1.44MB diskette drive

Chipset **Intel 865G chipset** / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMC<sup>®</sup> LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor

Ports *Front:* two USB (Version 2.0)  
*Back:* six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)

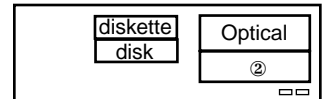
Audio Integrated digital audio / SoundMAX<sup>®</sup> Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec

Audio connectors *Back:* microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]  
 Speaker One internal speaker for business audio  
 Ethernet *Some:* 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / supports PXE and Wake on LAN<sup>®</sup>  
*Some:* 10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / supports PXE and Wake on LAN

Security chip *Some:* **Embedded Security Subsystem 2.0<sup>®</sup>** / hardware key storage / multi-factor authentication / local file encryption / Atmel<sup>®</sup> chip / TCG-compliant

Keyboard 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black  
 Mouse Optical Wheel Mouse (USB only), 400 dpi, black  
 Cooling fans Two or three variable speed fans (power supply, fansink, 3.0GHz+ have third fan)  
 Power supply 230 watts with variable speed fan / universal / manual switch

**Desktop**



- Bay ① 5.25", HH 1.6", access, std optical
- Bay ② 5.25", HH 1.6" access, open
- Bay ③ 3.5", SL 1", access, std diskette
- Bay ④ 3.5", SL 1", no access, std disk
- Slot 1: full-length, full-height, 32-bit AGP 8X (1.5v)
- Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v)
- Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)
- Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)
- Business black color; 25.2 liters
- 16.7" W X 16.3" D X 5.5" H
- 425mm W X 414mm D X 140mm H
- 22 to 25 lb (10.0 to 11.4 kg)
- Bay 1 and 2 in cage flips up (latched and pivoting)
- Bay 3 and 4 in cage flips up (latched and pivoting)
- Toolless rails for disk mounting
- Toolless cover removal; toolless AGP and PCI slots

**SYSTEMS MANAGEMENT**

- PC 2001-compliant
- Advanced Power Management 1.2
- Advanced Configuration and Power Interface (ACPI) 2.0b
- SMBIOS 2.3.1-compliant
- DMI 2.0-compliant
- Security chip models: Asset ID™.19 (system-specific info in chip)

**SECURITY**

- U-bolt anchoring feature (U-bolt is optional; supports optional padlock)
- Security slot (for attachment of optional cable lock)
- Power-on password
- Administrator password
- Boot sequence control
- Diskette boot inhibit
- Boot without keyboard or mouse
- Diskette and disk I/O control
- Serial/parallel I/O control
- Security chip models: security chip providing C2 tamper switch, Asset ID™.19, keylock on chassis, and other features

Supports ThinkVantage™ technologies

**LIMITED WARRANTY<sup>1</sup>**

- ⇒ 3 year parts and labor
- ⇒ International Warranty Service<sup>9</sup>
- ⇒ Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup>
- ⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup>
  - 3 year IOR 9x5, 4 hour response (ServicePac<sup>®</sup> part number 41L2734)
  - 3 year IOR 24x7, 4 hour response (ServicePac part number 41L2740)
- ⇒ Other ServicePac options at [ibm.com/services/us/its/pdf/wamomxeu.pdf](http://ibm.com/services/us/its/pdf/wamomxeu.pdf)
- ⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-3738)

Preload with Windows XP Professional <sup>5</sup>	Accessories
Microsoft® Windows® XP Professional	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271
- Disk-to-Disk Recovery (in hidden protected area)	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685
	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686
<b>Preloaded</b> (only some listed)	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272
• Model 38U/49U: contains additional module with a specialized education preload image in the base preload package**	120GB IDE Disk ATA-100 (7200 rpm) 09N4249
• Access IBM	160GB Serial ATA150 Disk (7200 rpm) 09N4254
• Access Support	Multi-Burner Plus <sup>®</sup> (DVD±RW; internal) 73P3370
• Rapid Restore™ Ultra	USB 2.0 Memory Key 512MB 22P9230
• Update Connector™.15	NVIDIA Quadro4 200NVS Dual Head 33L3543
• PC-Doctor™ (diagnostics)	ThinkVision L150 15" Monitor (black) 6636AC1
• Norton AntiVirus (OEM Version)	ThinkVision L170p 17" Monitor (black) 6734HBO
• RecordNow and DLA (CD-RW)	ThinkVision L191p 19" Monitor (black) 9419HB7
• InterVideo WinDVD (DVD models)	ThinkVision C220p 22" (20.0" vis) (black) 673560N
<b>License</b> - CD not included	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works

See footnotes for important warranty information  
 US models announced February 10, March 30, or August 17, 2004  
 US models withdrawn effective March or June 2005

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	EIDE Memory <sup>5</sup>	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Ethernet	Preload	Workhorse Global, Educ	Avail date
M50	8187-14U	4x4	Celeron® D 330	2.66	256KB	533		256MB	40GB <sup>2</sup>	CD	Extreme™ 2		Gigabit	XP Pro <sup>5</sup>	No	Oct 2004
M50	8187-15U	4x4	Celeron D 335	2.80	256KB	533		512MB	40GB	CD	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-3DU	4x4	Pentium® 4	2.8A	1MB	533		512MB	40GB	DVD	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-3EU	4x4	Pentium 4	2.8A	1MB	533		512MB	40GB	Combo	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Oct 2004
M50	8187-56U	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-57U	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	80GB	Combo	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-58U	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	Combo	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Oct 2004
M50	8187-63U	4x4	Pentium 4	3.4E	1MB	800	HT	512MB	40GB	CD	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-64U	4x4	Pentium 4	3.4E	1MB	800	HT	512MB	80GB	Combo	Extreme 2		Gigabit	XP Pro	No	Oct 2004
M50	8187-4EU	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	DVD	Extreme 2	Chip	Gigabit	XP Pro	No	Oct 2004
M50	8187-5BU	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2	Chip	Gigabit	XP Pro	No	Oct 2004
M50	8187-5AU	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	DVD	Extreme 2	Chip	Gigabit	XP Pro	Global	Oct 2004

Positioning Processor *Stability and manageability for the enterprise*  
**Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)** with 533MHz system bus or **Intel Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz** with 533 or 800MHz bus  
 Hyper-Threading L2 cache Implementation *Some: Hyper-Threading (HT) technology*  
**256KB or 1MB** std and max / ECC / full speed  
 Processor and L2 cache in FC-PGA2 in mPGA478B socket

Memory - std/max<sup>5</sup> **256 or 512MB std / 4GB max**  
 Memory Four 184-pin gold plated DIMM sockets / one socket used (two used on 5AU); *533MHz system bus: PC2700 333MHz DDR1 (CL2.5); 800MHz system bus: PC3200 400MHz DDR1 (CAS latency 3); All: non-parity / industry standard / unbuffered / dual channel capable*

Graphics **Integrated Intel Extreme™ Graphics 2 / Direct AGP /** in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector

EIDE disk Enhanced IDE / ATA-100 / 7200 rpm, rubber vibration dampening mounts  
 EIDE controller Integrated in I/O Controller Hub (ICH5)  
 EIDE cables Two EIDE 80-conductor cables (one 2-drop cable to optical, one 1-drop cable to disk) / two EIDE connectors on systemboard  
*Some: 48X-20X<sup>4</sup> CD-ROM / EIDE*

CD *Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE*  
 DVD *Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE*  
 Combo Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5  
 SATA controller No SATA cables / two SATA connectors on systemboard  
 SATA cables 3.5" 1.44MB diskette drive  
 Diskette drive

Chipset **Intel 865G chipset / 82865G Graphics Memory Controller Hub (GMCH) /** 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor

Ports *Front:* two USB (Version 2.0)  
*Back:* six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)

Audio Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec

Audio connectors *Back:* microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]

Speaker One internal speaker for business audio  
 Ethernet 10/100/1000 gigabit ethernet on planar / Intel 82541E1 PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / supports PXE and Wake on LAN<sup>8</sup>

Security chip *Some: Embedded Security Subsystem 2.0<sup>19</sup> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant*

Keyboard 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black

Mouse Optical Wheel Mouse (USB only), 400 dpi, black

Cooling fans Two or three variable speed fans (power supply, fansink, 3.0GHz+ have third fan)

Power supply 230 watts with variable speed fan / universal / manual switch

Preload with Windows XP Professional <sup>5</sup>	Accessories
Microsoft® Windows® XP Professional	533MHz: 128MB PC2700 CL2.5 NP DDR 31P8854
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 256MB PC2700 CL2.5 NP DDR 31P8855
<b>Preloaded</b>	533MHz: 512MB PC2700 CL2.5 NP DDR 31P8856
• Models 3EU/58U: contains additional module with a specialized education pre-load image in the base preload package**	533: 1GB PC2700 CL2.5 NP DDR UDIMM 31P8857
• Access IBM	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271
• Rapid Restore™ Ultra	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685
• Update Connector™.15	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686
• PC-Doctor™ (diagnostics)	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272
• Norton AntiVirus (OEM Version)	120GB IDE Disk ATA-100 (7200 rpm) 09N4249
• RecordNow and DLA (combo models)	160GB Serial ATA150 Disk (7200 rpm) 09N4254
• InterVideo WinDVD (DVD, combo models)	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370
<b>License</b> - CD not included	ThinkVision L170p 17" Monitor (black) 6734HB0
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision C220p 22" (20.0" vis) (black) 673560N
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>
	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works

**Desktop**

Bay ① 5.25", HH 1.6", access, std optical  
 Bay ② 5.25", HH 1.6" access, open  
 Bay ③ 3.5", SL 1", access, std diskette  
 Bay ④ 3.5", SL 1", no access, std disk

Slot 1: full-length, full-height, 32-bit AGP 8X (1.5v)  
 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)

- Business black color; 25.2 liters
- 16.7" W X 16.3"D X 5.5"H
- 425mm W X 414mm D X 140mm H
- 22 to 25 lb (10.0 to 11.4 kg)
- Bay 1 and 2 in cage flips up (latched and pivoting)
- Bay 3 and 4 in cage flips up (latched and pivoting)
- Toolless rails for disk mounting
- Toolless cover removal; toolless AGP and PCI slots

- SYSTEMS MANAGEMENT**
- PC 2001-compliant
  - Advanced Power Management 1.2
  - Advanced Configuration and Power Interface (ACPI) 2.0b
  - SMBIOS 2.3.1-compliant
  - DMI 2.0-compliant
  - Security chip models: Asset ID™.19 (system-specific info in chip)

- SECURITY**
- U-bolt anchoring feature (U-bolt is optional; supports optional padlock)
  - Security slot (for attachment of optional cable lock)
  - Power-on password
  - Administrator password
  - Boot sequence control
  - Diskette boot inhibit
  - Boot without keyboard or mouse
  - Diskette and disk I/O control
  - Serial/parallel I/O control
  - Security chip models: security chip providing C2 tamper switch, Asset ID™.19, keylock on chassis, and other features

- LIMITED WARRANTY<sup>1</sup>**
- ↔ 3 year parts and labor
  - ↔ International Warranty Service<sup>9</sup>
  - ↔ Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup>
  - ↔ Onsite service upgrade options (in eligible locations):<sup>7</sup>
    - 3 year IOR 9x5, 4 hour response (ServicePac® part number 41L2734)
    - 3 year IOR 24x7, 4 hour response (ServicePac part number 41L2740)
  - ↔ Other ServicePac options at [ibm.com/services/us/its/pdf/wamomxeu.pdf](http://ibm.com/services/us/its/pdf/wamomxeu.pdf)
  - ↔ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)

See footnotes for important warranty information  
 US models announced September 21, 2004  
 US models withdrawn effective June 2005

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	EIDE Memory <sup>6</sup>	EIDE disk	EIDE optical	Graphics	Security chip	Ethernet	Preload	Workhorse Global, Educ	Avail date
M50	8189-14U	4x5	Celeron®	2.6	128KB	400	512MB	40GB <sup>2</sup>	CD	Extreme™ 2 GMCH	No	Gigabit XP Pro <sup>5</sup>	Pro <sup>5</sup>	Educ	Feb 2004
M50	8189-3EU	4x5	Pentium® 4	2.8C	512KB	800	512MB	40GB		Extreme 2 GMCH	No	Gigabit XP Pro	Pro	Educ	Mar 2004
M50	8189-3FU	4x5	Pentium 4	2.8C	512KB	800	512MB	40GB	Combo	Radeon 9600	No	Gigabit XP Pro	Pro	Educ	Mar 2004
M50	8189-37U	4x5	Pentium 4	2.8E	1MB	800	256MB	40GB	CD	Extreme 2 GMCH	No	10/100 XP Pro	No		Feb 2004
M50	8189-38U	4x5	Pentium 4	2.8E	1MB	800	512MB	40GB	CD	Extreme 2 GMCH	No	Gigabit XP Pro	No		Feb 2004
M50	8189-46U	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB	CD	Extreme 2 GMCH	No	Gigabit XP Pro	W G		Feb 2004
M50	8189-47U	4x5	Pentium 4	3.0E	1MB	800	256MB	40GB	CD	Extreme 2 GMCH	No	10/100 XP Pro	No		Feb 2004
M50	8189-49U	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB	CD-RW	Extreme 2 GMCH	No	Gigabit XP Pro	No		Feb 2004
M50	8189-4CU	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB	CD	Extreme 2 GMCH	Chip	Gigabit XP Pro	No		Feb 2004
M50	8189-4EU	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB		Extreme 2 GMCH	No	Gigabit XP Pro	Pro	Educ	Feb 2004
M50	8189-4FU	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB	Combo	Radeon 9600	No	Gigabit XP Pro	Pro	Educ	Feb 2004
M50	8189-56U	4x5	Pentium 4	3.2	512KB	800	512MB	80GB	DVD±RW <sup>6</sup>	Radeon 9600	No	Gigabit XP Pro	Pro	Educ	Feb 2004
M50	8189-3GU	4x5	Pentium 4	2.8A	1MB	533	512MB	40GB	CD	Extreme 2 GMCH	No	Gigabit XP Pro	No		Aug 2004
M50	8189-3HU	4x5	Pentium 4	2.8A	1MB	533	256MB	40GB	CD	Extreme 2 GMCH	No	10/100 XP Pro	No		Aug 2004
M50	8189-4JU	4x5	Pentium 4	3.0E	1MB	800	512MB	40GB	DVD	Extreme 2 GMCH	No	Gigabit XP Pro	No		Aug 2004

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron at 2.6GHz</b> with 400MHz system bus or <b>Intel Pentium 4 at 2.8, 3.0, or 3.2GHz</b> with 533 or 800MHz bus	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; 31.4 liters</li> <li>7.5" W X 16.0"D X 16.3"H</li> <li>191mm W X 406mm D X 413mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul> 
Hyper-Threading L2 cache Implementation	<i>Some: Hyper-Threading (HT) technology</i> <b>128KB, 512KB, or 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>8</sup> Memory	<b>256 or 512MB std</b> / 4GB max Four 184-pin gold plated DIMM sockets / one socket used / <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable	<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std or opt optical</li> <li>Bay ② 5.25", HH 1.6" access, open</li> <li>Bay ③ 3.5", SL 1", access, open</li> <li>Bay ④ 3.5", SL 1", access, std diskette</li> <li>Bay ⑤ 3.5", SL 1", no access, std disk</li> </ul>
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</li> <li><b>ATI® Radeon 9600</b> / AGP 8X adapter / Radeon GPU / <b>128MB</b> std and max 500MHz DDR-SDRAM / 300MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / no dual head support</li> </ul>	
EIDE disk	<b>40 or 80GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)	
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical, one 2-drop to disk) / two EIDE connectors on systemboard <i>Some: 48X-20X<sup>4</sup> CD-ROM / EIDE</i>	<b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> <li><i>Security chip models: security chip providing C2 tamper switch, Asset ID<sup>19</sup>, keylock on chassis, and other features</i></li> </ul>
CD DVD CD-RW Combo DVD±RW	<i>Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE</i> <i>Some: 48X/32X/48X Max<sup>4</sup> CD-RW / EIDE</i> <i>Some: 48X/24X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i> <i>Some: DVD and CD burner / Multi-Burner Plus / writes DVD-RAM, DVD-R, DVD-RW, DVD+R, DVD+RW, CD-R, CD-RW / reads many DVD and CD formats / EIDE</i>	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>4 year IOR 9x5, Next Business Day (ServicePac® part number 69P9161)</li> <li>4 year IOR 9x5, 4 hour response (ServicePac part number 69P9162)</li> </ul> </li> <li>Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
SATA cables	No SATA cables / two SATA connectors on systemboard	
Diskette drive	3.5" 1.44MB diskette drive	
Chipset	<b>Intel 865G chipset</b> / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor	
Ports	<i>Front:</i> two USB (Version 2.0) <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec	
Audio connectors	<i>Back:</i> microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]	
Speaker	One internal speaker for business audio	
Ethernet	<i>Some: 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3</i> <i>Some: 10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3</i>	
Security chip	<i>Some: Embedded Security Subsystem 2.0<sup>18</sup> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant</i>	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Cooling fans	Two or three variable speed fans (power supply, fansink, 3.0GHz+ have third fan)	
Power supply	230 watts with variable speed fan / universal / manual switch	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	<b>800MHz:</b> 128MB PC3200 CL3 NP DDR1 22P9271	
<b>Preloaded</b> (only some listed)	<b>800MHz:</b> 256MB PC3200 CL3 NP DDR1 73P2685	
• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package**	<b>800MHz:</b> 512MB PC3200 CL3 NP DDR1 73P2686	
• InterVideo WinDVD (combo model)	<b>800:</b> 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272	
• RecordNow and DLA (CD-RW, combo)	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
• InterVideo WinDVD Creator (DVD, DVD±RW)	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works	
• Simple Backup (for DVD±RW)		

See footnotes for important warranty information  
US models announced February 10, March 30, or August 17, 2004  
US models withdrawn effective August 2004, March 2005, or June 2005

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory*	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Ethernet	Preload	Workhorse Global, Educ	Avail date
M50	8189-15U	4x5	Celeron® D 330	2.66	256KB	533		256MB	40GB <sup>2</sup>	CD	Extreme™ 2	No	Gigabit XP Pro <sup>5</sup>	No	Oct 2004	
M50	8189-16U	4x5	Celeron D 335	2.80	256KB	533		512MB	40GB	CD	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-17U	4x5	Celeron D 335	2.80	256KB	533		512MB	40GB	CD	Extreme 2	No	Gigabit XP Pro	<b>Educ</b>	Oct 2004	
M50	8189-3JU	4x5	Pentium® 4	2.8A	1MB	533		512MB	40GB	DVD	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-3KU	4x5	Pentium 4	2.8A	1MB	533		512MB	40GB	Combo	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-58U	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-59U	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	80GB	Combo	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-5AU	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	Combo	Extreme 2	No	Gigabit XP Pro	<b>Educ</b>	Oct 2004	
M50	8189-63U	4x5	Pentium 4	3.4E	1MB	800	HT	512MB	40GB	CD	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-64U	4x5	Pentium 4	3.4E	1MB	800	HT	512MB	80GB	Combo	Extreme 2	No	Gigabit XP Pro	No	Oct 2004	
M50	8189-4MU	4x5	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	DVD	Extreme 2	Chip	Gigabit XP Pro	No	Oct 2004	
M50	8189-5BU	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	DVD	Extreme 2	Chip	Gigabit XP Pro	Global	Oct 2004	
M50	8189-5CU	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2	Chip	Gigabit XP Pro	No	Oct 2004	

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533MHz system bus or <b>Intel Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz</b> with 533 or 800MHz bus	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; 31.4 liters</li> <li>7.5" W X 16.0"D X 16.3"H</li> <li>191mm W X 406mm D X 413mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul>
Hyper-Threading L2 cache Implementation	<i>Some:</i> Hyper-Threading (HT) technology <b>256KB or 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>2</sup> Memory	<b>256 or 512MB std</b> / 4GB max Four 184-pin gold plated DIMM sockets / one socket used (two used on 5BU); <i>533MHz system bus:</i> <b>PC2700 333MHz DDR1</b> (CL2.5); <i>800MHz system bus:</i> <b>PC3200 400MHz DDR1</b> (CAS latency 3); <i>All:</i> non-parity / industry standard / unbuffered / dual channel capable	
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector	Bay ① 5.25", HH 1.6", access, std or opt optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk Slot 1: 3/4-length, full-height, 32-bit AGP 8X (1.5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)
EIDE disk	<b>40 or 80GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)	
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical, one 2-drop to disk) / two EIDE connectors on systemboard	<b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> <li><i>Security chip models:</i> security chip providing C2 tamper switch, Asset ID<sup>19</sup>, keylock on chassis, and other features</li> </ul>
CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE	
DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>4 year IOR 9x5, Next Business Day (ServicePac® part number 69P9161)</li> <li>4 year IOR 9x5, 4 hour response (ServicePac part number 69P9162)</li> </ul> </li> <li>Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-3738)</li> </ul>
Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5	<b>ACCESSORIES</b> 533MHz: 256MB PC2700 CL2.5 NP DDR 31P8855 533MHz: 512MB PC2700 CL2.5 NP DDR 31P8856 533: 1GB PC2700 CL2.5 NP DDR UDIMM 31P8857 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 NVIDIA Quadro4 200NVS Dual Head 33L3543 ThinkVision L170p 17" Monitor (black) 6734HB0
SATA cables	No SATA cables / two SATA connectors on systemboard	
Diskette drive	3.5" 1.44MB diskette drive	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works
Chipset	<b>Intel 865G chipset</b> / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor	
Ports	<i>Front:</i> two USB (Version 2.0) <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> <ul style="list-style-type: none"> <li><i>Models 17U/5AU:</i> contains additional module with a specialized education preload image in the base preload package**</li> <li>Access IBM</li> <li>Rapid Restore™ Ultra</li> <li>Update Connector™.15</li> <li>PC-Doctor™ (diagnostics)</li> <li>Norton AntiVirus (OEM Version)</li> <li>RecordNow and DLA (combo models)</li> <li>InterVideo WinDVD (DVD, combo models)</li> </ul> License - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec <i>Back:</i> microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm] One internal speaker for business audio	
Audio connectors	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / Wake on LAN®	• Embedded Security Subsystem 2.0 <sup>18</sup> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant
Speaker	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / Wake on LAN®	
Ethernet	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / Wake on LAN®	Keyboard Mouse Cooling fans Power supply
Security chip	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.3 / Wake on LAN®	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two or three variable speed fans (power supply, fansink, 3.0GHz+ have third fan) 230 watts with variable speed fan / universal / manual switch
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Cooling fans	Two or three variable speed fans (power supply, fansink, 3.0GHz+ have third fan)	230 watts with variable speed fan / universal / manual switch
Power supply	230 watts with variable speed fan / universal / manual switch	

See footnotes for important warranty information  
US models announced September 21, 2004  
US models withdrawn effective June 2005

# ThinkCentre® M51 (8141) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
<b>M51</b>	8141-11U	4x4	Pentium® 4 520	2.8 1MB	800	HT	512MB	40GB <sup>2</sup>	CD	GMA 900 GMCH	Sec	No	XP Pro <sup>5</sup>	No	Aug 2004
<b>M51</b>	8141-23U	4x4	Pentium 4 530	3.0 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	No	Aug 2004
<b>M51</b>	8141-31U	4x4	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	W G	Aug 2004
<b>M51</b>	8141-32U	4x4	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	Yes	XP Pro	No	Aug 2004

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium 4 Processor 520 (2.8GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 800MHz system bus	<b>Desktop</b>	
Hyper-Threading L2 cache Implementation	Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory std/max <sup>8</sup> Memory	<b>512MB std</b> / 4GB max Four 184-pin gold plated DIMM sockets / two sockets used (256MB DIMM in each socket / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual channel capable	Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6" access, open Bay ④ 3.5", SL 1", no access, std disk Slot 1: full-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector	<ul style="list-style-type: none"> <li>• Business black color</li> <li>• Supports up to 100 lb monitor on top of metal cover</li> <li>• 17.4" W X 15.7"D X 5.5"H</li> <li>• 442mm W X 400mm D X 140mm H</li> <li>• 24 to 31 lb (11 to 14 kg)</li> <li>• Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting)</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of cover</li> <li>• Toolless install and remove of adapter cards</li> </ul>	
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6		
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard		
EIDE CD	48X-20X <sup>4</sup> CD-ROM / EIDE		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / AD11981B codec		
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]		
Speaker	One internal speaker for business audio		
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot		
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (front and power supply)		
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft® Windows® XP Professional		
	- Disk-to-Disk Recovery (in hidden protected area)		
<b>Preloaded</b>	<ul style="list-style-type: none"> <li>• Access Program</li> <li>• Rescue and Recovery™</li> <li>• Update Connector™.15</li> <li>• Adobe Reader</li> <li>• Norton AntiVirus (OEM version)</li> <li>• PC-Doctor™ (diagnostics)</li> </ul>		
<b>Downloadable</b>	<ul style="list-style-type: none"> <li>• Client Security Software</li> <li>• Software Delivery Assistant</li> <li>• System Migration Assistant</li> <li>• IBM Director Agent</li> </ul>		
<b>License</b> - CD not included	- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
<b>Accessories</b>	128MB PC3200 CL3 NP DDR1 UDIMM 22P9271 256MB PC3200 CL3 NP DDR1 UDIMM 73P2685 512MB PC3200 CL3 NP DDR1 UDIMM 73P2686 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB Serial ATA150 Disk (7200 rpm) 09N4253 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB Fingerprint Reader 73P4774 USB 2.0 Portable Multi-Burner Drive 22P9163 USB 2.0 Portable 80GB Hard Disk 40Y8726 USB 2.0 Memory Key 1GB 40Y7421 ThinkVision® L151 15" Monitor (black) 9205AB2 ThinkVision L151p 15" Monitor (black) 9205HB2 ThinkVision L171 17" Monitor (black) 9417AB1 ThinkVision L171p 17" Monitor (black) 9417HB7 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HC9 ThinkVision C170 17" (16.0" vis) (black) 6737P6N ThinkVision C190 19" (18.0" vis) (black) 6739PON DVI-I PCIe Connection Graphic Adapter 73P2516 NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X700 128MB Dual Head 73P2518 Kensington® MicroSaver® Desktop Lock 06P3839 Enhanced Performance USB Keyboard 73P2620 Enh Perf Wireless Keyboard and Mouse 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		
		<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3 year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3 year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9197)</li> <li>• 3 year LOR 9x5, 4 hour response (ThinkPlus part number 41C9192)</li> <li>• 3 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> </ul> </li> <li>⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>	

See footnotes for important warranty information  
US models announced August 3, 2004  
US models withdrawn effective August or December 2005

Name	Type-model	Slot x bay	Processor	L2 GHz	Bus cache	Hyper-MHz	Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
M51	8141-A1U	4x4	Celeron® 330	2.66	256K	533		256MB	40GB <sup>2</sup>	CD	GMA 900	Sec	No	XP Pro <sup>5</sup>	No	Nov 2004
M51	8141-A2U	4x4	Celeron 335	2.80	256K	533		256MB	40GB	CD	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8141-12U	4x4	Pentium® 4 515	2.93	1MB	533		256MB	40GB	CD	GMA 900	Sec	Yes	XP Pro	No	Jan 2005
M51	8141-14U	4x4	Pentium 4 515	2.93	1MB	533		512MB	40GB	CD	GMA 900	Sec	No	XP Pro	No	Jan 2005
M51	8141-15U	4x4	Pentium 4 515	2.93	1MB	533		512MB	40GB	CD-RW	GMA 900	Sec	No	XP Pro	No	Jan 2005
M51	8141-26U	4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	40GB	DVD	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8141-28U	4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8141-29U	4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	80GB	Combo	X300 SE 64MB	Sec	No	XP Pro	No	Nov 2004
M51	8141-36U	4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	40GB	CD	GMA 900	Sec	No	XP Pro	Educ	Nov 2004
M51	8141-37U	4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	DVD	GMA 900	Sec	Yes	XP Pro	W G	Nov 2004
M51	8141-39U	4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	Combo	X300 SE 64MB	Sec	No	XP Pro	No	Nov 2004
M51	8141-3AU	4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533 system bus or <b>Intel Pentium 4 Processor 515 (2.93GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 533 or 800MHz system bus										<b>Desktop</b>					
Hyper-Threading L2 cache	Some: Hyper-Threading (HT) technology <b>256KB</b> or <b>1MB</b> std and max / ECC / full speed															
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket										Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6" access, open Bay ④ 3.5", SL 1", no access, std disk Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)					
Memory std/max <sup>8</sup>	<b>256</b> or <b>512MB</b> std / 4GB max										Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)					
Memory	Four 184-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual channel capable										<ul style="list-style-type: none"> <li>Business black color</li> <li>Supports up to 100 lb monitor on top of metal cover</li> <li>17.4" W X 15.7"D X 5.5"H</li> <li>442mm W X 400mm D X 140mm H</li> <li>24 to 31 lb (11 to 14 kg)</li> <li>Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting)</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of cover</li> <li>Toolless install and remove of adapter cards</li> </ul>					
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</li> <li><b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>64MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>										<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>					
SATA disk	<b>40, 80, or 160GB</b> / SATA150 7200 rpm / vibration dampening mounts										<b>SECURITY</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> <li>Some: cover intrusion switch</li> </ul>					
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6															
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard															
EIDE CD or DVD	Some: 48X-20X <sup>4</sup> CD-ROM / EIDE; Some: 16X-48X Max <sup>4</sup> DVD-ROM / EIDE															
EIDE CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE															
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE															
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)															
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar															
Diskette drive	3.5" 1.44MB diskette drive															
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keyboard, mouse, auto-thermal controls, hardware event log															
Ports	Front: two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] Back: six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)															
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec															
Audio connectors	Back: line-in (stereo), line-out (stereo) [both 3.5mm]															
Speaker	One internal speaker for business audio															
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3															
Security chip	<b>Embedded Security Subsystem 2.0</b> <sup>18</sup> / hardware key storage / TCG-compliant															
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black															
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black															
Cooling fans	Two variable speed fans (front and power supply)															
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs															
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>															
Microsoft® Windows® XP Professional with Service Pack 2	128MB PC3200 CL3 NP DDR1 UDIMM										22P9271					
- Disk-to-Disk Recovery (in hidden protected area)	256MB PC3200 CL3 NP DDR1 UDIMM										73P2685					
	512MB PC3200 CL3 NP DDR1 UDIMM										73P2686					
	1GB PC3200 CL3 NP DDR1 UDIMM										22P9272					
	160GB Serial ATA150 Disk (7200 rpm)										09N4254					
	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)										73P3370					
	USB 2.0 Portable Multi-Burner Drive										22P9163					
	USB 2.0 Memory Key 1GB										40Y7421					
	ThinkVision® L171p 17" Monitor (black)										9417HB7					
	ThinkVision L191p 19" Monitor (black)										9419HB7					
	ThinkVision C190 19" (18.0" vis) (black)										6739PON					
	Kensington® MicroSaver® Desktop Lock										06P3839					
	Enh Perf Wireless Keyboard and Mouse										73P4067					
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>															
<b>Preloaded</b> (only some listed)											<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>					
• Some: contains additional module with a specialized education preload image in the base preload package																
• Access Program																
• Rescue and Recovery™																
• Update Connector™ <sup>15</sup>																
• Norton AntiVirus (OEM version)																
• PC-Doctor™ (diagnostics)																

See footnotes for important warranty information  
US models announced November 16, 2004  
US models withdrawn effective June, August, or December 2005



# ThinkCentre® M51 (8141) - February 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 GHz	Bus cache MHz	Hyper-Thread	EM64T	Memory <sup>6</sup>	SATA disk	EIDE optical	Security Graphics chip	Cover switch	Key-board	Workhorse Preload	Avail Global, Educ	
<b>M51</b>	8141-A4U 4x4	Celeron® 345J	3.06	256K	533		512MB	40GB <sup>2</sup>	CD	GMA 900	Sec No	Pref	XP Pro <sup>5</sup>	No Feb 05	
<b>M51</b>	8141-4JU 4x4	Pentium® 4 550	3.40	1MB	800	HT	512MB	80GB	DVD	GMA 900	Sec No	Pref	XP Pro	No Feb 05	
<b>M51</b>	8141-4KU 4x4	Pentium 4 550	3.40	1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	No Feb 05	
<b>M51</b>	8141-4LU 4x4	Pentium 4 550	3.40	1MB	800	HT	512MB	80GB	Combo	X300 SE	Sec No	Pref	XP Pro	No Feb 05	
<b>M51</b>	8141-4MU 4x4	Pentium 4 550	3.40	1MB	800	HT	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No Feb 05	
<b>M51</b>	8141-B9U 4x4	Pentium 4 630	3.00	2MB	800	HT	EM64T	512MB	80GB	CD	GMA 900	Sec Yes	Pref	XP Pro	No Feb 05
<b>M51</b>	8141-D9U 4x4	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	80GB	Combo	GMA 900	Sec Yes	Pref	XP Pro	No Feb 05
<b>M51</b>	8141-2AU 4x4	Pentium 4 530	3.00	1MB	800	HT	512MB	80GB	CD	GMA 900	Sec Yes	Finger	XP Pro	No May 05	
<b>M51</b>	8141-2CU 4x4	Pentium 4 530	3.00	1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	<b>Educ</b> May 05	
<b>M51</b>	8141-3CU 4x4	Pentium 4 540	3.20	1MB	800	HT	512MB	80GB	CD	GMA 900	Sec Yes	Finger	XP Pro	No May 05	

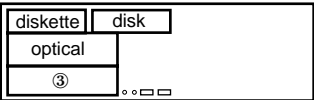
Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron Processor 345J (3.06GHz)</b> with Execute Disable Bit and 533 system bus or <b>Intel Pentium 4 Processor 530 (3.00GHz), 540 (3.40GHz), 550 (3.40GHz), 630 (3.00GHz), or 640 (3.2GHz)</b> with 800MHz bus <i>Pentium 4 6xx: Extended Memory 64 Technology, Execute Disable Bit</i> <i>Some: Hyper-Threading (HT) Technology</i>	<b>Desktop</b> 
Proc features Hyper-Threading L2 cache Implementation	<b>256KB, 1MB, or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	
Memory std/max <sup>8</sup> Memory	<b>512MB std / 4GB max</b> Four 184-pin gold plated DIMM sockets / <i>some: two sockets used (256MB DIMM in each socket); models 2AU/3CU: one socket used / PC3200 400MHz DDR1 / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual-channel capable</i>	Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6" access, open Bay ④ 3.5", SL 1", no access, std disk  Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)  • Business black color • Supports up to 100 lb monitor on top of metal cover • 17.4" W X 15.7"D X 5.5"H • 442mm W X 400mm D X 140mm H • 24 to 31 lb (11 to 14 kg) • Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting) • Toolless install and removal of disk, optical, diskette • Toolless install and removal of cover • Toolless install and removal of adapter cards
Graphics (one of following)	• <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector • <b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>64MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support	<b>SYSTEMS MANAGEMENT</b> • PC 2001-compliant • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.4-compliant • DMI 2.0-compliant • Asset ID <sup>19</sup> (system specific info in chip accessed over network)
SATA disk SATA controller SATA cables EIDE CD EIDE DVD EIDE Combo EIDE controller EIDE cables Diskette drive	<b>40 or 80GB / SATA150</b> 7200 rpm / vibration dampening mounts Serial ATA / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar <i>Some: 48X-20X<sup>4</sup> CD-ROM / EIDE</i> <i>Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE</i> <i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar 3.5" 1.44MB diskette drive	
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log	<b>SECURITY</b> • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington Microsaver cable) - No keylock • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Disk, removable, and network device boot password • Diskette write protect • Front USB port disablement • <i>Some: cover intrusion switch</i> • <i>Some: fingerprint reader keyboard</i>
Ports Audio Audio connectors Speaker Ethernet Security chip	Keyboard: [Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Mouse: Optical Wheel Mouse (USB only), 400 dpi, black Cooling fans: Two variable speed fans (front and power supply) Power supply: 310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs	
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)	Supports ThinkVantage™ technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
<b>Preloaded</b>	• <i>Some: contains additional module with a specialized education preload image in the base preload package</i> • Access Program • Rescue and Recovery™ • Update Connector™ <sup>15</sup> • Adobe Reader • Norton AntiVirus (OEM version) • PC-Doctor™ (diagnostics) • RecordNow and DLA (combo) • InterVideo WinDVD (combo, DVD)	
<b>Accessories</b>	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 160GB Serial ATA300 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 1GB 40Y7421 ThinkVision® L151 15" Monitor (black) 9205AB6 ThinkVision L171p 17" Monitor (black) 9417HB2 ThinkVision L192p 19" Monitor (black) 9419HB2 ThinkVision L201p 20.1" Monitor (black) 9320HB1 ThinkVision C190 19" (18.0" vis) (black) 6739P0N Kensington® MicroSaver® Desktop Lock 06P3839 Enh Perf Wireless Keyboard and Mouse 73P4067 ATI® RADEON® X300 SE 128MB Dual Head 40Y8405 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ 3-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ 24x <sup>7,14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup> via 800-IBM-SERV (426-7378)

See footnotes for important warranty information  
 US models announced February 22 or April 19, 2005  
 US models withdrawn effective August 2005, December 2005, or May 2006

# ThinkCentre® M51 (8141) - July 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	EM64T	Memory <sup>®</sup>	SATA disk	EIDE optical	Security Graphics chip	Cover switch	Key-board	Workhorse Preload	Avail Global, Educ	date
M51	8141-A7U	4x4	Celeron® D 331	2.66	256K	533	EM64T	256MB	40GB <sup>2</sup>	CD	GMA 900	Sec No	Pref	XP Pro <sup>5</sup>	No	July 05
M51	8141-A8U	4x4	Celeron D 336	2.80	256K	533	EM64T	256MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-AAU	4x4	Celeron D 346	3.06	256K	533	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-1BU	4x4	Pentium® 4 516	2.93	1MB	533	EM64T	256MB	40GB	CD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-1CU	4x4	Pentium 4 516	2.93	1MB	533	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-1DU	4x4	Pentium 4 516	2.93	1MB	533	EM64T	512MB	40GB	CD-RW	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-19U	4x4	Pentium 4 521	2.8	1MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-2EU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-2FU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	40GB	DVD	GMA 900	Sec No	Pref	XP Pro	Global	July 05
M51	8141-2HU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	Educ	July 05
M51	8141-2JU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-2KU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	80GB	Combo	X300 SE	Sec No	Pref	XP Pro	No	July 05
M51	8141-2MU	4x4	Pentium 4 531	3.0	1MB	800 HT	EM64T	512MB	80GB	CD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-3FU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	Global	July 05
M51	8141-3GU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-3HU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-3KU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-3LU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	80GB	Combo	X300 SE	Sec No	Pref	XP Pro	No	July 05
M51	8141-3NU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	80GB	DVD	GMA 900	Sec Yes	Pref	XP Pro	Global	July 05
M51	8141-3PU	4x4	Pentium 4 541	3.2	1MB	800 HT	EM64T	512MB	80GB	CD	GMA 900	Sec Yes	Finger	XP Pro	No	July 05
M51	8141-4VU	4x4	Pentium 4 551	3.4	1MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-4WU	4x4	Pentium 4 551	3.4	1MB	800 HT	EM64T	512MB	80GB	Combo	X300 SE	Sec No	Pref	XP Pro	No	July 05
M51	8141-4XU	4x4	Pentium 4 551	3.4	1MB	800 HT	EM64T	512MB	80GB	DVD	GMA 900	Sec No	Pref	XP Pro	No	July 05
M51	8141-54U	4x4	Pentium 4 551	3.4	1MB	800 HT	EM64T	512MB	80GB	DVD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-BDU	4x4	Pentium 4 630	3.00	2MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec Yes	Pref	XP Pro	Global	July 05
M51	8141-BEU	4x4	Pentium 4 630	3.00	2MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-DCU	4x4	Pentium 4 640	3.20	2MB	800 HT	EM64T	512MB	40GB	CD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-DDU	4x4	Pentium 4 640	3.20	2MB	800 HT	EM64T	512MB	80GB	Combo	GMA 900	Sec Yes	Pref	XP Pro	No	July 05
M51	8141-DEU	4x4	Pentium 4 640	3.20	2MB	800 HT	EM64T	512MB	80GB	DVD	GMA 900	Sec Yes	Pref	XP Pro	No	July 05

Positioning	<i>Stability and manageability for the enterprise</i>	<b>Desktop</b>	
Processor	<b>Intel® Celeron D Processor 326, 331, 336</b> with EM64T, Execute Disable Bit, and 533MHz bus or <b>Intel Pentium 4 Processor 516, 521, 531, 541, 551, 630, 640</b> with EM64T, Execute Disable Bit (except 516), and 533 or 800MHz bus <i>Some: Hyper-Threading (HT) technology; 6xx: EIST</i>		
Proc features	<i>Some: Hyper-Threading (HT) technology; 6xx: EIST</i>	Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6", access, open Bay ④ 3.5", SL 1", no access, std disk	
L2 cache	<b>256KB, 1MB, or 2MB</b> std and max / ECC / full speed	Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	<ul style="list-style-type: none"> <li>• Business black color</li> <li>• Supports up to 100 lb monitor on top of metal cover</li> <li>• 17.4" W X 15.7" D X 5.5" H</li> <li>• 442mm W X 400mm D X 140mm H</li> <li>• 24 to 31 lb (11 to 14 kg)</li> <li>• Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting)</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of cover</li> <li>• Toolless install and remove of adapter cards</li> </ul>	
Memory std/max <sup>9</sup>	<b>256 or 512MB std / 4GB max</b>	<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on and administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch</li> <li>• <i>Some:</i> fingerprint reader keyboard</li> </ul>	
Memory	Four 184-pin gold plated DIMM sockets / <i>some:</i> two sockets used (256MB DIMM in each socket); <i>models A7U/A8U/1BU:</i> one 256MB DIMM in one socket (3 available); <i>models 2MU/3PU/DEU:</i> one 512MB DIMM in one socket (3 available) / <b>PC3200 400MHz DDR1 / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual-channel capable</b>		
Graphics (one of following)	<ul style="list-style-type: none"> <li>• <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G / 333MHz / one 15-pin analog connector</li> <li>• <b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>64MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>		
SATA disk	<b>40 or 80GB / SATA150</b> 7200 rpm / vibration dampening mounts	<ul style="list-style-type: none"> <li>➔ <b>3-year parts and labor limited warranty*</b></li> <li>➔ <b>International Warranty Service<sup>9</sup></b></li> <li>➔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> </ul>	
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar		
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM		
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW		
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / AC '97 interface / ADI1981B codec		
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5705 controller / 32-bit PCI 2.3		
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant		
Keyboard (one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (front and power supply)		
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs		

See footnotes for important warranty information  
 US models announced July 19, 2005  
 US models withdrawn effective December 2005 or May 2006

# ThinkCentre® M51 (8143) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
<b>M51</b>	8143-11U	4x5	Pentium® 4 520	2.8 1MB	800	HT	512MB	40GB <sup>2</sup>	CD	GMA 900 GMCH	Sec	No	XP Pro <sup>5</sup>	No	Aug 2004
<b>M51</b>	8143-24U	4x5	Pentium 4 530	3.0 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	No	Aug 2004
<b>M51</b>	8143-32U	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	Yes	XP Pro	No	Aug 2004
<b>M51</b>	8143-33U	4x5	Pentium 4 540	3.2 1MB	800	HT	256MB	40GB	None	GMA 900 GMCH	Sec	No	XP Pro	No	Aug 2004
<b>M51</b>	8143-34U	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	W G	Aug 2004
Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium 4 Processor 520 (2.8GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 800MHz system bus										<b>Tower</b>				
Hyper-Threading L2 cache	Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed										<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.7"D X 19.4"H</li> <li>• 175mm W X 450mm D X 492mm H</li> <li>• 23 to 30 lb (10.5 to 13.5 kg)</li> <li>• Handle on top front</li> <li>• Rear disk bay pivots out to side</li> <li>• Toolless disk, optical, diskette removal</li> <li>• Toolless cover removal</li> <li>• Toolless adapter slots</li> <li>• Easy-to-service chassis design</li> <li>• Front audio and USB ports</li> </ul>				
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket														
Memory std/max <sup>8</sup>	<b>256MB</b> or <b>512MB</b> std / 4GB max														
Memory	Four 184-pin gold plated DIMM sockets / <b>256MB</b> models: one socket used; <b>512MB</b> models: two sockets used (256MB DIMM in each socket) / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable														
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector										Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk				
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts														
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6														
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard														
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE														
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)														
EIDE cables	<i>Some:</i> one 2-drop EIDE 80-conductor cable to optical / <i>All:</i> one EIDE connector on systemboard														
Diskette drive	3.5" 1.44MB diskette drive														
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log												<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>		
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>- No keylock</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch</li> </ul>		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / AD1981B codec														
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]														
Speaker	One internal speaker for business audio														
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot														
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant														
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black														
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black														
Cooling fans	Two variable speed fans (front and power supply)														
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs														
<b>Preload with Windows XP Professional<sup>5</sup></b>		<b>Accessories</b>													
Microsoft® Windows® XP Professional		128MB PC3200 CL3 NP DDR1 UDIMM 22P9271													
- Disk-to-Disk Recovery (in hidden protected area)		256MB PC3200 CL3 NP DDR1 UDIMM 73P2685													
<b>Preloaded</b>		512MB PC3200 CL3 NP DDR1 UDIMM 73P2686													
• Access Program		1GB PC3200 CL3 NP DDR1 UDIMM 22P9272													
• Rescue and Recovery™		80GB Serial ATA150 Disk (7200 rpm) 09N4253													
• Update Connector™.15		160GB Serial ATA150 Disk (7200 rpm) 09N4254													
• Adobe Reader		48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042													
• Norton AntiVirus (OEM version)		Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370													
• PC-Doctor™ (diagnostics)		USB 2.0 Portable Multi-Burner Drive 22P9163													
<b>Downloadable</b>		USB 2.0 Portable 80GB Hard Disk 40Y8726													
• Client Security Software		USB 2.0 Memory Key 1GB 40Y7421													
• Software Delivery Assistant		ThinkVision® L151p 15" Monitor (black) 9205AB2													
• System Migration Assistant		ThinkVision L171p 17" Monitor (black) 9417HB7													
• IBM Director Agent		ThinkVision L191p 19" Monitor (black) 9419HB7													
<b>License</b> - CD not included		ThinkVision L200p 20.1" Monitor (black) 6736HC9													
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		ThinkVision C170 17" (16.0" vis) (black) 6737P6N													
		ThinkVision C190 19" (18.0" vis) (black) 6739PON													
		DVI-I PCIe Connection Adapter (ADD2) 73P2516													
		NVIDIA® GeForce 6200 64MB Dual Head 73P2517													
		ATI® RADEON® X700 128MB Dual Head 73P2518													
		Kensington® MicroSaver® Desktop Lock 06P3839													
		Enh Perf Wireless Keyboard and Mouse 73P4067													
		Enhanced Performance USB Keyboard 73P2620													
		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>													
ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>												<b>LIMITED WARRANTY<sup>1</sup></b>			
⇒ 3 year parts and labor												⇒ International Warranty Service <sup>9</sup>			
⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)												⇒ Onsite service upgrade options (in eligible locations): <sup>7</sup>			
												• 3 year LOR 24x7, 4 hour response (ThinkPlus™ part number 41C9193)			
⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a>												⇒ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup> via 800-IBM-SERV (426-7378)			

See footnotes for important warranty information  
US models announced August 3, 2004  
US models withdrawn effective August or December 2005

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
M51	8143-13U	4x5	Pentium® 4 515	2.93 1MB	533		512MB	40GB <sup>2</sup>	CD	GMA 900	Sec	No	XP Pro <sup>5</sup>	No	Jan 2005
M51	8143-14U	4x5	Pentium 4 515	2.93 1MB	533		512MB	40GB	CD-RW	GMA 900	Sec	No	XP Pro	No	Jan 2005
M51	8143-27U	4x5	Pentium 4 530	3.0 1MB	800	HT	512MB	40GB	DVD	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8143-28U	4x5	Pentium 4 530	3.0 1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8143-29U	4x5	Pentium 4 530	3.0 1MB	800	HT	512MB	80GB	Combo	X300 SE 64MB	Sec	No	XP Pro	No	Nov 2004
M51	8143-38U	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	80GB	DVD	GMA 900	Sec	No	XP Pro	W G	Nov 2004
M51	8143-39U	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004
M51	8143-3AU	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	Educ	Nov 2004
M51	8143-3BU	4x5	Pentium 4 540	3.2 1MB	800	HT	512MB	80GB	Combo	X300 SE 64MB	Sec	No	XP Pro	No	Nov 2004

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium 4 Processor 515 (2.93GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 533 or 800MHz system bus		<b>Tower</b>	
Hyper-Threading L2 cache	Some: Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed		<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.7"D X 19.4"H</li> <li>175mm W X 450mm D X 492mm H</li> <li>23 to 30 lb (10.5 to 13.5 kg)</li> <li>Handle on top front</li> <li>Rear disk bay pivots out to side</li> <li>Toolless disk, optical, diskette removal</li> <li>Toolless cover removal</li> <li>Toolless adapter slots</li> <li>Easy-to-service chassis design</li> <li>Front audio and USB ports</li> </ul>	
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket		<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6", access, open</li> <li>Bay ③ 3.5", SL 1", access, open</li> <li>Bay ④ 3.5", SL 1", access, std diskette</li> <li>Bay ⑤ 3.5", SL 1", no access, std disk</li> </ul>	
Memory std/max <sup>8</sup> Memory	<b>512MB std</b> / 4GB max Four 184-pin gold plated DIMM sockets / two sockets used (256MB DIMM in each socket) / <b>PC3200 400MHz DDR1</b> / CAS latency 3 / non-parity / industry standard / unbuffered / dual channel capable		<ul style="list-style-type: none"> <li>Slot 1: full-length, full-height, PCI Express x16 - used</li> <li>Slot 2: half-length, full-height, PCI Express x1 in some</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</li> </ul>	
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</li> <li><b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>64MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>		<b>SYSTEMS MANAGEMENT</b>	
SATA disk	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts			<ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6			<b>SECURITY</b>
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors			<ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>
EIDE CD or DVD	Some: 48X-20X <sup>4</sup> CD-ROM / Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer			
EIDE CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE			
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE			
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)			
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar			
Diskette drive	3.5" 1.44MB diskette drive			
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log			
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)			
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / AD1981B codec			
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]			
Speaker	One internal speaker for business audio			
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3			
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant			
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black			
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black			
Cooling fans	Two variable speed fans (front and power supply)			
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs			
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>			
Microsoft® Windows® XP Professional with Service Pack 2	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271			
- Disk-to-Disk Recovery (in hidden protected area)	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685			
<b>Preloaded</b>	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686			
• Model 3AU: contains additional module with a specialized education preload image in the base preload package**	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272			
• Access Program	160GB Serial ATA150 Disk (7200 rpm) 09N4254			
• Rescue and Recovery™	Multi-Burner Plus <sup>5</sup> (DVD±RW; internal) 73P3370			
• Update Connector™ <sup>15</sup>	USB 2.0 Portable Multi-Burner Drive 22P9163			
• Adobe Reader	USB 2.0 Memory Key 1GB 40Y7421			
• Norton AntiVirus (OEM version)	ThinkVision® L151p 15" Monitor (black) 9205HB2			
• PC-Doctor™ (diagnostics)	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>			
	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works			
				<b>LIMITED WARRANTY<sup>1</sup></b>
				<ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>

See footnotes for important warranty information  
US models announced November 16, 2004  
US models withdrawn effective June or December 2005

# ThinkCentre® M51 (8143) - February 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	Memory <sup>8</sup> EM64T	SATA disk	EIDE optical	Security Graphics	Cover chip	Key-switch board	Workhorse Preload	Avail Global, Educ	
M51	8143-3CU	4x5	Pentium® 4 540	3.20	1MB	800	HT	512MB 80GB <sup>2</sup>	Combo	X300 SE	Sec	No	Pref	XP Pro <sup>5</sup> No	Feb 05
M51	8143-4GU	4x5	Pentium 4 550	3.40	1MB	800	HT	512MB 80GB	DVD	GMA 900	Sec	No	Pref	XP Pro No	Feb 05
M51	8143-4JU	4x5	Pentium 4 550	3.40	1MB	800	HT	512MB 80GB	Combo	GMA 900	Sec	No	Pref	XP Pro No	Feb 05
M51	8143-4KU	4x5	Pentium 4 550	3.40	1MB	800	HT	512MB 80GB	DVD±RW <sup>6</sup>	X600 128	Sec	No	Pref	XP Pro Educ	Feb 05
M51	8143-4LU	4x5	Pentium 4 550	3.40	1MB	800	HT	512MB 40GB	CD	GMA 900	Sec	No	Pref	XP Pro No	Feb 05
M51	8143-4MU	4x5	Pentium 4 550	3.40	1MB	800	HT	512MB 80GB	Combo	X300 SE	Sec	No	Pref	XP Pro No	Feb 05
M51	8143-BBU	4x5	Pentium 4 630	3.00	2MB	800	HT	EM64T 256MB 80GB	CD	GMA 900	Sec	Yes	Pref	XP Pro No	Feb 05
M51	8143-D6U	4x5	Pentium 4 640	3.20	2MB	800	HT	EM64T 256MB 80GB	CD	GMA 900	Sec	Yes	Pref	XP Pro No	Feb 05
M51	8143-2AU	4x4	Pentium 4 530	3.00	1MB	800	HT	512MB 80GB	CD	GMA 900	Sec	Yes	Finger	XP Pro No	May 05
M51	8143-2CU	4x4	Pentium 4 530	3.00	1MB	800	HT	512MB 80GB	Combo	GMA 900	Sec	No	Pref	XP Pro Educ	May 05
M51	8143-3DU	4x4	Pentium 4 540	3.20	1MB	800	HT	512MB 80GB	CD	GMA 900	Sec	Yes	Finger	XP Pro No	May 05

Positioning	<i>Stability and manageability for the enterprise</i>		<b>Tower</b>
Processor	<b>Intel® Pentium 4 530 (3.00GHz), 540 (3.20GHz), 550 (3.40GHz), 630 (3.00GHz), or 640 (3.20GHz)</b> with Hyper-Threading and 800MHz bus		<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.7" D X 19.4" H</li> <li>175mm W X 450mm D X 492mm H</li> <li>23 to 30 lb (10.5 to 13.5 kg)</li> <li>Handle on top front</li> <li>Rear disk bay pivots out to side</li> <li>Toolless disk, optical, diskette removal</li> <li>Toolless cover removal</li> <li>Toolless adapter slots</li> <li>Easy-to-service chassis design</li> <li>Front audio and USB ports</li> </ul>
Proc features	Pentium 4 6xx: Extended Memory 64 Technology, Execute Disable Bit		
L2 cache	<b>1MB or 2MB</b> std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory std/max <sup>9</sup>	<b>256 or 512MB std</b> / 4GB max		<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6", access, open</li> <li>Bay ③ 3.5", SL 1", access, open</li> <li>Bay ④ 3.5", SL 1", access, std diskette</li> <li>Bay ⑤ 3.5", SL 1", no access, std disk</li> </ul>
Memory	Four 184-pin gold plated DIMM sockets / some: two sockets used (256MB DIMM in each socket); <i>models 2AU/3DU</i> : one socket used / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual-channel capable		
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</li> <li><b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>64MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> <li><b>ATI RADEON X600 PRO</b> / PCI Express x16 adapter / <b>128MB</b> 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support</li> </ul>		<ul style="list-style-type: none"> <li>Slot 1: full-length, full-height, PCI Express x16 - used</li> <li>Slot 2: half-length, full-height, PCI Express x1 in some</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</li> </ul>
SATA disk	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6		
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors		
EIDE CD or DVD	<i>Some</i> : 48X-20X <sup>4</sup> CD-ROM / <i>Some</i> : 16X-48X Max <sup>4</sup> DVD-ROM / single-layer		
EIDE Combo	<i>Some</i> : 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE		
EIDE DVD±RW	<i>Some</i> : DVD and CD burner / Multi-Burner Plus / writes DVD-RAM, DVD-R, DVD-RW, DVD+R, DVD+RW, CD-R, CD-RW / reads many DVD and CD formats / EIDE		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	<i>Front</i> : two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back</i> : six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / AC '97 interface / ADI1981B codec		
Audio connectors	<i>Back</i> : line-in (stereo), line-out (stereo) [both 3.5mm]		
Speaker	One internal speaker for business audio		
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3		
Security chip	<b>Embedded Security Subsystem 2.0</b> <sup>18</sup> / in NS PC8375T chip / TCG-compliant		
Keyboard (one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black		
Mouse	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Cooling fans	Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	Two variable speed fans (front and power supply)		
	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs		

<p><b>Preload with Windows XP Professional<sup>5</sup></b></p> <p>Microsoft® Windows® XP Professional with Service Pack 2</p> <p>- Disk-to-Disk Recovery (in hidden protected area)</p> <p><b>Preloaded</b> (only some listed)</p> <ul style="list-style-type: none"> <li>Model 4KU: contains additional module with a specialized education preload image in the base preload package**</li> <li>Rescue and Recovery™</li> <li>PC-Doctor™ (diagnostics)</li> <li>RecordNow and DLA (Combo, DVD±RW)</li> <li>InterVideo WinDVD (Combo, DVD±RW)</li> <li>InterVideo WinDVD Creator (DVD±RW)</li> <li>Simple Backup (for DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <p>128MB PC3200 CL3 NP DDR1 UDIMM 22P9271</p> <p>256MB PC3200 CL3 NP DDR1 UDIMM 73P2685</p> <p>512MB PC3200 CL3 NP DDR1 UDIMM 73P2686</p> <p>1GB PC3200 CL3 NP DDR1 UDIMM 22P9272</p> <p>USB 2.0 Memory Key 1GB 40Y7421</p> <p>USB 2.0 Super Multi-Burner Drive 40Y8638</p> <p>Multi-Burner Plus<sup>5</sup> (DVD±RW; internal) 73P3370</p> <p>ThinkVision® L151 15" Monitor (black) 9205AB6</p> <p>ThinkVision L192p 19" Monitor (black) 9419HB2</p> <p>ATI® RADEON® X300 SE 128MB Dual Head 40Y8405</p> <p>Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></p> <p>**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works</p>	<p>ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> </ul>
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See footnotes for important warranty information  
US models announced February 22 or April 19, 2005  
US models withdrawn effective December 2005 or May 2006

# ThinkCentre® M51 (8143) - July 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>a</sup> EM64T	SATA disk	EIDE optical	Security Graphics	Cover chip	Key-switch board	Workhorse Preload	Avail Global, Educ
M51	8143-A6U	4x5	Celeron® D 331	2.66	256K	533	EM64T 256MB	40GB <sup>2</sup>	CD	GMA 900	Sec	No Pref	XP Pro <sup>5</sup>	No July 05
M51	8143-A7U	4x5	Celeron D 336	2.80	256K	533	EM64T 256MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-A8U	4x5	Celeron D 336	2.80	256K	533	EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	<b>Educ</b> July 05
M51	8143-A9U	4x5	Celeron D 346	3.06	256K	533	EM64T 256MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-19U	4x5	Pentium® 4 516	2.93	1MB	800	EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-1AU	4x5	Pentium 4 516	2.93	1MB	800	EM64T 512MB	40GB	CD-RW	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-18U	4x5	Pentium 4 521	2.8	1MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-2EU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-2FU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	40GB	DVD	GMA 900	Sec	No Pref	XP Pro	Global July 05
M51	8143-2HU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	No Pref	XP Pro	<b>Educ</b> July 05
M51	8143-2JU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-2KU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	80GB	Combo	X300 SE	Sec	No Pref	XP Pro	No July 05
M51	8143-2LU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	80GB	DVD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-2MU	4x5	Pentium 4 531	3.0	1MB	800	HT EM64T 512MB	80GB	CD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-3EU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 256MB	40GB	None	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-3GU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	Global July 05
M51	8143-3HU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-3KU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	No Pref	XP Pro	<b>Educ</b> July 05
M51	8143-3LU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-3MU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	80GB	Combo	X300 SE	Sec	No Pref	XP Pro	No July 05
M51	8143-3NU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	80GB	DVD	GMA 900	Sec	Yes Pref	XP Pro	Global July 05
M51	8143-3PU	4x5	Pentium 4 541	3.2	1MB	800	HT EM64T 512MB	80GB	CD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-4UU	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-4WU	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-4XU	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	80GB	DVD	GMA 900	Sec	No Pref	XP Pro	No July 05
M51	8143-54U	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	80GB	DVD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-55U	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	80GB	DVD±RW <sup>6</sup>	GMA 900	Sec	No Pref	XP Pro	<b>Educ</b> July 05
M51	8143-57U	4x5	Pentium 4 551	3.4	1MB	800	HT EM64T 512MB	80GB	Combo	X600 128	Sec	No Pref	XP Pro	No July 05
M51	8143-BEU	4x5	Pentium 4 630	3.00	2MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	Yes Pref	XP Pro	Global July 05
M51	8143-BFU	4x5	Pentium 4 630	3.00	2MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-DBU	4x5	Pentium 4 640	3.20	2MB	800	HT EM64T 512MB	40GB	CD	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-DCU	4x5	Pentium 4 640	3.20	2MB	800	HT EM64T 512MB	80GB	Combo	GMA 900	Sec	Yes Pref	XP Pro	No July 05
M51	8143-DDU	4x5	Pentium 4 640	3.20	2MB	800	HT EM64T 512MB	80GB	DVD	GMA 900	Sec	Yes Pref	XP Pro	No July 05

Processor	Intel® Celeron D Processor 331, 336, 346 with EM64T, Execute Disable Bit, and 533MHz bus or Intel Pentium 4 Processor 516, 521, 531, 541, 551, 630, 640 with EM64T, Execute Disable Bit (except 516), and 533 or 800MHz bus	Tower	<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.7" D X 19.4" H</li> <li>175mm W X 450mm D X 492mm H</li> <li>23 to 30 lb (10.5 to 13.5 kg)</li> <li>Handle on top front</li> <li>Rear disk bay pivots out to side</li> <li>Toolless disk, optical, diskette removal</li> <li>Toolless cover removal</li> <li>Toolless adapter slots</li> <li>Easy-to-service chassis design</li> <li>Front audio and USB ports</li> </ul>	
Proc features	Some: Hyper-Threading (HT) technology; 6xx: EIST			
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket			
Memory <sup>a</sup>	256 or 512MB std / 4GB max / four 184-pin gold plated sockets / some: two sockets used (256MB DIMM in each socket); models A6U/A7U/A9U/3EU: one 256MB DIMM in 1 socket (3 avail); models 2MU/3PU/DDU: one 512MB DIMM in 1 socket (3 avail) / PC3200 400MHz DDR1 / CAS latency 3 (CL3) / non-parity / ind standard / unbuffered / dual-channel capable			
Graphics (one of following)	<ul style="list-style-type: none"> <li>Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915G / 333MHz / one 15-pin analog connector</li> <li>ATI® RADEON® X300 SE / PCI Express x16 adapter / 64MB 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> <li>ATI RADEON X600 PRO / PCI Express x16 adapter / 128MB 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support</li> </ul>	<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6", access, open</li> <li>Bay ③ 3.5", SL 1", access, open</li> <li>Bay ④ 3.5", SL 1", access, std diskette</li> <li>Bay ⑤ 3.5", SL 1", no access, std disk</li> </ul>		
SATA disk	40 or 80GB / SATA150 7200 rpm / vibration dampening mounts	Slot 1: full-length, full-height, PCI Express x16 - used		
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6	Slot 2: half-length, full-height, PCI Express x1 in some		
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors	Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)		
EIDE CD or DVD	Some: 48X-20X <sup>4</sup> CD-ROM / Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer	Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)		
EIDE CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW			
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo			
EIDE DVD±RW	Some: DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)			
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar			
Diskette drive	3.5" 1.44MB diskette drive			
Chipset	Intel 915G Express Chipset / ICH6 for SATA150, ATA-100 EIDE, PCI Express x1 / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log			
Ports	Front: two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] Back: six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)			
Audio	Integrated digital audio / SoundMAX® Cadenza / AC '97 interface / ADI1981B codec			
Audio connectors	Back: line-in (stereo), line-out (stereo) [both 3.5mm]			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5705 controller / 32-bit PCI 2.3			
Security chip	Embedded Security Subsystem 2.0 <sup>18</sup> / in NS PC8375T chip / TCG-compliant			
Keyboard (one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black			
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black			
Cooling fans	Two variable speed fans (front and power supply)			
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs			
			<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for opt cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on and administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password • Diskette write protect</li> <li>Front USB port disablement</li> <li>Some: cover intrusion switch</li> <li>Some: fingerprint reader keyboard</li> </ul> <p>⇒ 3-year parts and labor limited warranty<sup>1</sup> ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</p>	

See footnotes for important warranty information  
US models announced July 19, 2005  
US models withdrawn effective December 2005 or May 2006

# ThinkCentre™ M51 (8143) - Celeron - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
<b>M51</b>	8143-A1U	4x5	Celeron® 330	2.66	256KB	533	No	256MB	40GB <sup>2</sup>	CD	GMA 900 GMCH	Sec	No	XP Pro <sup>5</sup>	No	Nov 2004
<b>M51</b>	8143-A2U	4x5	Celeron 335	2.80	256KB	533	No	256MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	No	Nov 2004
<b>M51</b>	8143-A3U	4x5	Celeron 335	2.80	256KB	533	No	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	<b>Educ</b>	Nov 2004
<b>M51</b>	8143-A5U	4x5	Celeron 345J	3.06	256KB	533	No	256MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	No	Feb 2005

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron Processor 330 (2.66GHz), 335 (2.80GHz), or 345J (3.06GHz)</b> with 533MHz bus (345J: Execute Disable Bit)										<b>Tower</b>		
Hyper-Threading L2 cache	None <b>256KB</b> std and max / ECC / full speed										<ul style="list-style-type: none"> <li>Business black color; 38.75 liters</li> <li>6.9" W X 17.7" D X 19.4" H</li> <li>175mm W X 450mm D X 492mm H</li> <li>23 to 30 lb (10.5 to 13.5 kg)</li> <li>Handle on top front</li> <li>Rear disk bay pivots out to side</li> <li>Toolless disk, optical, diskette removal</li> <li>Toolless cover removal</li> <li>Toolless adapter slots</li> <li>Easy-to-service chassis design</li> <li>Front audio and USB ports</li> </ul>		
Memory std/max <sup>9</sup> Memory	<b>256MB</b> or <b>512MB</b> std / 4GB max Four 184-pin gold plated DIMM sockets / <i>256MB models: one socket used;</i> <i>512MB models: two sockets used (256MB DIMM in each socket) /</i> <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable										Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk		
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector										Slot 1: full-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)		
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts										<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6												
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard										<b>SECURITY</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>		
EIDE CD	48X-20X <sup>4</sup> CD-ROM / EIDE												
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)										<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3 year IOR 24x7, 4 hour response (ServicePac part number 41L2740)</li> </ul> </li> <li>Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on systemboard												
Diskette drive	3.5" 1.44MB diskette drive												
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log												
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec												
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]												
Beeper	One internal speaker for business audio												
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot												
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant												
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black												
Cooling fans	Two variable speed fans (front and power supply)												
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs												
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)												
<b>Preloaded</b>	<ul style="list-style-type: none"> <li>Model A3U: contains additional module with a specialized education preload image in the base preload package**</li> <li>Access IBM</li> <li>Rescue and Recovery™</li> <li>Update Connector™<sup>15</sup></li> <li>Adobe Reader</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> </ul>												
<b>Downloadable</b>	<ul style="list-style-type: none"> <li>Client Security Software</li> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul>												
<b>License</b> - CD not included	<ul style="list-style-type: none"> <li>Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</li> </ul>												
<b>Accessories</b>	128MB PC2700 CL2.5 NP DDR UDIMM 31P8854 256MB PC2700 CL2.5 NP DDR UDIMM 31P8855 512MB PC2700 CL2.5 NP DDR UDIMM 31P8856 1GB PC2700 CL2.5 NP DDR UDIMM 31P8857 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus® (DVD±RW; internal) 73P3370 USB Fingerprint Reader 73P4774 USB 2.0 Combo Drive 73P4515 USB 2.0 Portable Multi-Burner Drive 22P9163 USB 2.0 Memory Key 512MB 22P9230 ThinkVision™ L150 15" Monitor (black) 6636AC1 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C190 19" (18.0" vis) (black) 673960N NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X700 128MB Dual Head 73P2518 Kensington® MicroSaver® Desktop Lock 06P3839 Enhanced Performance USB Keyboard 73P2620 Preferred Pro USB Fingerprint Keyboard 73P4730 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>												
	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works												

See footnotes for important warranty information  
US models announced November 16, 2004 or February 22, 2005  
US models withdrawn effective August 2005

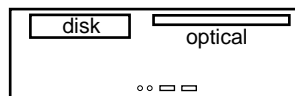
# ThinkCentre® M51 Ultra Small (8104) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x	L2	Bus	Hyper-	Diskette	SATA	EIDE	Graphics	PCI	Cover	Key-	Workhorse	Gbl	Avail				
Type-model	bay	Processor	GHz	cache	MHz	Thread	Memory*	drive	disk	optical	in GMCH	modem	switch	board	Preload	Education	date	
M51	8104-BKU	1x2	Celeron® 336	2.80	256K	533	256MB	None	40GB <sup>2</sup>	CD	GMA 900	No	No	Pref	XP Pro	No	May 05	
M51	8104-BLU	1x2	Celeron 346	3.06	256K	533	256MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	<b>Educ</b>	May 05	
M51	8104-BMU	1x2	Celeron 346	3.06	256K	533	256MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05	
M51	8104-2RU	1x2	Pentium® 4 521	2.80	1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No	Jun 06
M51	8104-2SU	1x2	Pentium 4 521	2.80	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	Jun 06
M51	8104-2UU	1x2	Pentium 4 521	2.80	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	Yes	Yes	Pref	XP Pro	No	Jun 06
M51	8104-5BU	1x2	Pentium 4 524	3.06	1MB	533	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	No	July 06
M51	8104-2CU	1x2	Pentium 4 531	3.00	1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-2DU	1x2	Pentium 4 531	3.00	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-2NU	1x2	Pentium 4 531	3.00	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	Gbl	Sep 05
M51	8104-3AU	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-3BU	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-3DU	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	Yes	Finger	XP Pro	No	May 05
M51	8104-3FU	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	<b>Educ</b>	May 05
M51	8104-3JU	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	Gbl	May 05
M51	8104-92U	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No	July 06
M51	8104-93U	1x2	Pentium 4 541	3.20	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	No	July 06
M51	8104-4EU	1x2	Pentium 4 551	3.40	1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-4FU	1x2	Pentium 4 551	3.40	1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-4GU	1x2	Pentium 4 551	3.40	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	Yes	Finger	XP Pro	No	May 05
M51	8104-4HU	1x2	Pentium 4 551	3.40	1MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	Gbl	May 05
M51	8104-D1U	1x2	Pentium 4 630	3.00	2MB	800	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-D2U	1x2	Pentium 4 630	3.00	2MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-E1U	1x2	Pentium 4 640	3.20	2MB	800	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-E2U	1x2	Pentium 4 640	3.20	2MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No	May 05
M51	8104-E5U	1x2	Pentium 4 640	3.20	2MB	800	HT	512MB	None	80GB	DVD	GMA 900	No	No	Pref	XP Pro	Gbl	Sep 05

Positioning	<i>Smallest ThinkCentre desktop without compromise</i>
Processor	<b>Intel® Celeron D Processor 336</b> or <b>346</b> with 533MHz bus or <b>Intel Pentium 4 Processor 521, 524, 531, 541, 551, 630, or 640</b> with 533MHz or 800MHz bus
Proc features	All: Extended Memory 64 Technology, Execute Disable Bit
Hyper-Threading	Some: Hyper-Threading (HT) technology
L2 cache	<b>256KB</b> or <b>1MB</b> std and max / ECC / full speed
Socket	Processor and L2 cache in FC-LGA4 in LGA775 socket
Memory	<b>256 or 512MB std</b> / 4GB max <sup>8</sup> / two 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics / uses main memory / 333MHz / one 15-pin analog connector
SATA disk	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6
SATA cables	One SATA cable (one 1-drop to disk) / one SATA connector
EIDE CD	Some: 24X-10X <sup>4</sup> CD-ROM / Ultrabay Enhanced (12.5mm high)
EIDE DVD	Some: 8X-3.3X <sup>4</sup> DVD-ROM / Ultrabay Enhanced (12.5mm high)
EIDE Combo	Some: 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo / Ultrabay Enhanced (12.5mm high)
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)
EIDE cables	One cable (one 1-drop Ultrabay Enhanced cable to optical) / one EIDE connector (Ultrabay Enhanced) on systemboard
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive
Chipset	<b>Intel 915GV Express Chipset</b> / 82915GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (mono), headphone out (mono) <i>Back:</i> four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)
Audio connectors	<i>Back:</i> line-in (mono), line-out (mono) [all 3.5mm]
Audio	Integrated digital audio / SoundMAX® Cadenza / AC '97 / ADI1981B codec
Speaker	One internal speaker for business audio
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY/MAC / 32-bit PCI 2.3 / Wake on LAN®
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black
(one of following)	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black
Cooling fans	Four variable speed fans (front, back, fansink, power supply)
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs

**Ultra Small**



Bay ① 3.5", SL 1", access, std disk (desktop)  
Bay ② 5.25", \*slim .5", access, std optical (notebook)  
\* Optical bay is Ultrabay™ Enhanced 12.5mm high (supports select ThinkPad-based Ultrabay Enhanced [12.5mm high] and Ultrabay Slim [9.5mm high] devices)

Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)

- Up to 75% less space than desktop chassis
- Business black color; metal case
- 10.8" W X 10.8"D X 3.4"H
- 275mm W X 275mm D X 87.5mm H
- 13.2 to 14.0 lb (6.0 to 6.4 kg)
- Toolless cover flips up and tilts backward on rear hinges
- Toolless disk and optical drive removal
- Bays 1 and 2 flip up (latched and pivoting)
- Toolless PCI slot and riser card retention
- Steel chassis supports 100 lb (45kg) monitor on top

- SYSTEMS MANAGEMENT**
- PC 2001-compliant
  - ACPI 2.0b-compliant
  - SMBIOS 2.3.1-compliant
  - DMI 2.0-compliant
  - Asset ID<sup>19</sup> (system specific info in chip)

- SECURITY**
- Security chip (see information on left)
  - Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons
  - Power-on password
  - Administrator password
  - Boot sequence control
  - Boot without keyboard or mouse
  - USB, ethernet, SATA, EIDE, serial, parallel enable or disable
  - Disk, removable, and network device boot password
  - Some: cover intrusion switch
  - Some: fingerprint reader keyboard

Preload with Windows XP Professional <sup>5</sup>	Accessories	LIMITED WARRANTY <sup>1</sup>
Microsoft® Windows® XP Professional	512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971	<p>↔ <b>3-year parts and labor</b></p> <p>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></p>
<b>Preloaded</b> (only some listed)	1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972	
• Some: contains additional module with a specialized education preload image	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973	
• RecordNow and DLA (combo models)	Super Multi-Burner Ultrabay Enhanced Drv 40Y8624	
• InterVideo WinDVD (combo, DVD)	ThinkCentre Ultra Small Under Desk Mount 40Y8625 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced on May 17, 2005, Sept 13, 2005, June 6, 2006 and July 25, 2006  
US models withdrawn effective May 2006 or June 2007



# ThinkCentre® M52 Tower (8113) - Celeron - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Chipset	Cover switch	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date	
M52	8113-A1U	4x4	Celeron® D 331	2.66	256K	533	No	256MB	40GB <sup>2</sup>	CD	GMA 950	945G	No	XP Pro	3-yr	No	Jun 05
M52	8113-A2U	4x4	Celeron D 336	2.80	256K	533	No	512MB	40GB	CD	GMA 950	945G	Yes	XP Pro	3-yr	No	Jun 05
M52	8113-B2U	4x4	Celeron D 346	3.06	256K	533	No	512MB	40GB	CD	GMA 950	945G	No	XP Pro	3-yr	No	Jun 05

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron D Processor 331 (2.66GHz), 336 (2.80GHz), 346 (3.06GHz)</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus	<b>Tower</b>	
L2 cache Implementation	<b>256KB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	<ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>	
Memory - std/max <sup>8</sup>	<b>256 or 512MB std</b> / 4GB max / <b>DDR2 only</b>	<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6", access, open</li> <li>Bay ③ 3.5", SL 1", access, std diskette</li> <li>Bay ④ 3.5", SL 1", no access, std disk</li> </ul>	
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	<ul style="list-style-type: none"> <li>Slot 1: full-length, full-height, PCI Express x16 (75w max)</li> <li>Slot 2: full-length, full-height, PCI Express x1</li> <li>Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector		
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar		
EIDE CD	48X-20X <sup>4</sup> CD-ROM		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log	<ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>ACPI 2.0c-compliant</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>SMBus 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip)</li> </ul>	
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot		
Modem	None		
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (front and power supply)		
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b>	
<b>Preloaded</b>	<ul style="list-style-type: none"> <li>Access Program</li> <li>Rescue and Recovery™</li> <li>Adobe Reader</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> <li>Client Security Software</li> </ul>	<ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Super Multi-Burner DL DVD±RW Drive 41N5581</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB Fingerprint Reader 41U3167</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0/Analog Headset by Sennheiser 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>USB 2.0 Essential Memory Key 2GB 41U4944</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Portable 120GB Hard Disk 41N8379</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>Lenovo L192 Wide 19" Monitor (black) 6920AB1</li> <li>Lenovo D221 Wide 22" Monitor (black) 6622HB2</li> <li>ThinkVision® L171p 17" Monitor (black) 9417HC2</li> <li>ThinkVision L192p 19" Monitor (black) 9419HC2</li> <li>ThinkVision L201p 20.1" Monitor (black) 9220HB1</li> <li>ScrollPoint® Pro Optical Mouse (black) 31P8700</li> <li>Optical 3-button ScrollPoint Mouse (black) 31P7405</li> <li>Lenovo Laser Mouse (USB, PS/2) 41U3074</li> <li>Kensington® MicroSaver® Desktop Lock 06P3839</li> <li>Enhanced Performance USB Keyboard 73P2620</li> <li>Enh Perf Wireless Keyboard and Mouse 73P4067</li> <li>DVI-I PCIe Connection Adapter (ADD2) 73P2516</li> <li>ATI® RADEON® X300 SE 128MB Dual Head 41U4813</li> <li>ATI X1300 256MB Dual Head/TV-out 41U5028</li> </ul>	
<b>Downloadable</b>	<ul style="list-style-type: none"> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul>		
<b>License</b> - CD not included	- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		
			<ul style="list-style-type: none"> <li>Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></li> </ul>
			<b>LIMITED WARRANTY<sup>1</sup></b>
			<ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>

See footnotes for important warranty information  
US models announced June 28, 2005  
US models withdrawn effective June 2007

**ThinkCentre® M52 Tower (8113) - Pentium 4 - withdrawn**

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	Execute disable	Memory <sup>9</sup>	SATA disk	EIDE optical	Graphics	Cover switch	Intel IAMT	Key-board warranty <sup>1</sup>	Limited Gbl, Educ	Workhorse Avail date
M52	8113-11U 4x4	Pentium® 4 516	2.93 1MB	533			512MB	40G <sup>2</sup> CD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-12U 4x4	Pentium 4 516	2.93 1MB	533			512MB	80G DVD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-21U 4x4	Pentium 4 531	3.00 1MB	800	HT	XD	512MB	40G CD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-22U 4x4	Pentium 4 531	3.00 1MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	
M52	8113-24U 4x4	Pentium 4 531	3.00 1MB	800	HT	XD	512MB	80G DVD	GMA 950		Yes	Finger	3-yr	Jun 05	
M52	8113-28U 4x4	Pentium 4 531	3.00 1MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	W G Jun 05	
M52	8113-31U 4x4	Pentium 4 541	3.20 1MB	800	HT	XD	512MB	40G CD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-32U 4x4	Pentium 4 541	3.20 1MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	
M52	8113-34U 4x4	Pentium 4 541	3.20 1MB	800	HT	XD	512MB	80G DVD	NVIDIA 64M			Pref	3-yr	Aug 05	
M52	8113-35U 4x4	Pentium 4 541	3.20 1MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	G Jun 05	
M52	8113-36U 4x4	Pentium 4 541	3.20 1MB	800	HT	XD	512MB	80G DVD	GMA 950		Yes	Finger	3-yr	Jun 05	
M52	8113-41U 4x4	Pentium 4 551	3.40 1MB	800	HT	XD	512MB	40G CD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-42U 4x4	Pentium 4 551	3.40 1MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	
M52	8113-44U 4x4	Pentium 4 551	3.40 1MB	800	HT	XD	512MB	80G DVD	NVIDIA 64M			Pref	3-yr	Aug 05	
M52	8113-45U 4x4	Pentium 4 551	3.40 1MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-46U 4x4	Pentium 4 551	3.40 1MB	800	HT	XD	512MB	80G DVD	GMA 950		Yes	Finger	3-yr	Jun 05	
M52	8113-D1U 4x4	Pentium 4 630	3.00 2MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	W G Jun 05	
M52	8113-D3U 4x4	Pentium 4 630	3.00 2MB	800	HT	XD	256MB	80G DVD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-D5U 4x4	Pentium 4 630	3.00 2MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	
M52	8113-D6U 4x4	Pentium 4 630	3.00 2MB	800	HT	XD	512MB	80G DVD	GMA 950			IAMT	Pref	3-yr	W G Aug 05
M52	8113-E1U 4x4	Pentium 4 640	3.20 2MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-E7U 4x4	Pentium 4 640	3.20 2MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	
M52	8113-F1U 4x4	Pentium 4 650	3.40 2MB	800	HT	XD	512MB	80G DVD	GMA 950			Pref	3-yr	Jun 05	
M52	8113-F4U 4x4	Pentium 4 650	3.40 2MB	800	HT	XD	512MB	80G Combo	GMA 950			Pref	3-yr	Jun 05	

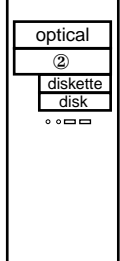
Processor	Intel® Pentium 4 Processor 516, 531, 541, 551, 630, 640, or 650 with single-core, EM64T, and 533 or 800MHz system bus	Tower	<ul style="list-style-type: none"><li>Business black color</li><li>7.0" W X 17.7"D X 17.0"H</li><li>178mm W X 450mm D X 432mm H</li><li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li><li>Handle on top front</li><li>Thumbscrew to remove bay 3 and 4</li><li>Toolless install and removal of disk, optical, diskette</li><li>Toolless install and removal of side cover</li><li>Toolless install and removal of adapter cards</li></ul>
Processor features	Some: Hyper-Threading (HT) technology, Execute Disable Bit (XD)		
L2 cache	1MB or 2MB std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>9</sup>	256 or 512MB std / 4GB max / <b>DDR2 only</b>		
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		
Graphics	(one of following) <ul style="list-style-type: none"><li>Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector</li><li>NVIDIA® GeForce® 6200 / PCI Express x16 adapter / 64MB 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li></ul>		<p>Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk Slot 1: full-length, full-height, PCI Express x16 (75w max)* Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) * slot used by adapter in some models</p>
SATA disk	40 or 80GB / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	Intel 945G Express Chipset / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1		
Intel AMT	Some: Intel Active Management Technology (IAMT)		
Security chip	Trusted Platform Module / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black (one of following) [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (front and power supply)		
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
Preload with Windows XP Professional <sup>5</sup>	Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden area)	Accessories	
Preloaded (only some listed)		512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
Rescue and Recovery™		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
Client Security Software		2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985
RecordNow and DLA (combo models)		Super Multi-Burner DL DVD±RW Drive	41N5581
InterVideo WinDVD (combo models)		Lenovo D221 Wide 22" Monitor (black)	6622HB1
		Lenovo Laser Mouse (USB, PS/2)	41U3074
		ATI® RADEON® X300 SE 128MB Dual Head	41U4813
		ATI X1300 256MB Dual Head/TV-out	41U5028
		Other accessories at lenovo.com/accessories	
			<ul style="list-style-type: none"><li>PC 2001-compliant</li><li>ACPI 2.0c-compliant</li><li>SMBIOS 2.3.4-compliant</li><li>DMI 2.0 and SMBus 2.0-compliant</li><li>Asset ID<sup>19</sup> (system specific info in chip)</li></ul> <h3>SECURITY</h3> <ul style="list-style-type: none"><li>Security chip (see information on left)</li><li>One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none"><li>Padlock loop (in rear for opt padlock)</li><li>Security slot (in rear for optional Kensington Microsaver cable)</li><li>No keylock</li></ul></li><li>Power-on password</li><li>Administrator password</li><li>Hard disk password (user and master)</li><li>Boot sequence control</li><li>Boot without keyboard, mouse, diskette</li><li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li><li>Disk, removable, and network device boot password</li><li>Diskette write protect</li><li>Front USB port disablement</li><li>Some: cover intrusion switch</li><li>Some: fingerprint reader keyboard</li></ul>
			<ul style="list-style-type: none"><li>3-year parts and labor limited warranty<sup>1</sup></li><li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li></ul>

See footnotes for important warranty information  
US models announced on June 28 and August 23, 2005  
US models withdrawn effective May 2006 or June 2007

Name	Type	Slot x model bay	Processor	L2 Cache	Bus MHz	Hyper-Thread	EM64T	Memory	Diskette drive	SATA disk	EIDE optical	Graphics	Intel IAMT	Key-board	Limited warranty <sup>1</sup>	Workhorse <sup>2</sup>	Avail date
<b>M52</b>	8113-13U	4x4	Pentium® 4 519K	3.06 1MB	533		EM64T	512MB		40G <sup>2</sup>	CD	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-14U	4x4	Pentium 4 519K	3.06 1MB	533		EM64T	512MB	Diskette	40G	CD-RW	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-15U	4x4	Pentium 4 519K	3.06 1MB	533		EM64T	512MB		80G	Combo	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-2AU	4x4	Pentium 4 521	2.80 2MB	800	HT	EM64T	512MB		80G	CD	GMA	No	Pref	3-yr		Jun 06
<b>M52</b>	8113-2BU	4x4	Pentium 4 521	2.80 2MB	800	HT	EM64T	512MB		80G	Combo	GMA	No	Pref	3-yr		Jun 06
<b>M52</b>	8113-D8U	4x4	Pentium 4 630	3.00 2MB	800	HT	EM64T	512MB		40G	CD	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-E9U	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	Pref	3-yr	Global	Nov 05
<b>M52</b>	8113-EBU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	512MB		40G	CD	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-EDU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	Finger	3-yr		Nov 05
<b>M52</b>	8113-FCU	4x4	Pentium 4 650	3.40 2MB	800	HT	EM64T	512MB		40G	CD	GMA	No	Pref	3-yr		Nov 05
<b>M52</b>	8113-FEU	4x4	Pentium 4 650	3.40 2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	Finger	3-yr		Nov 05
<b>M52</b>	8113-DCU	4x4	Pentium 4 630	3.00 2MB	800	HT	EM64T	512MB	Diskette	80G	CD	GMA	No	Pref	3-yr		Feb 06
<b>M52</b>	8113-EGU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	Pref	3-yr		Feb 06
<b>M52</b>	8113-EJU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	1GB	Diskette	160G	DVD±RW <sup>6</sup>	X300SE	No	Pref	3-yr		Feb 06
<b>M52</b>	8113-EKU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	1GB	Diskette	160G	Combo	X300SE	No	Pref	3-yr		Feb 06
<b>M52</b>	8113-DFU	4x4	Pentium 4 630	3.00 2MB	800	HT	EM64T	512MB	Diskette	80G	Combo	GMA	No	Pref	3-yr	Educ	Apr 06
<b>M52</b>	8113-ELU	4x4	Pentium 4 640	3.20 2MB	800	HT	EM64T	512MB	Diskette	80G	Combo	GMA	No	Pref	3-yr	Educ	Apr 06
<b>M52</b>	8113-FGU	4x4	Pentium 4 650	3.40 2MB	800	HT	EM64T	512MB	Diskette	160G	DVD±RW	X300SE	No	Pref	3-yr	Educ	Apr 06
<b>M52</b>	8113-H3U	4x4	Pentium 4 661	3.60 2MB	800	HT	EM64T	512MB	Diskette	80G	CD	GMA	No	Pref	3-yr		Apr 06
<b>M52</b>	8113-H4U	4x4	Pentium 4 661	3.60 2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	Pref	3-yr		Apr 06
<b>M52</b>	8113-H6U	4x4	Pentium 4 661	3.60 2MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	Pref	3-yr		Apr 06

Processor	<b>Intel® Pentium 4 Processor 519K, 521, 630, 640, 650 or 661</b> with single-core, EM64T, Execute Disable Bit, and 533 or 800MHz bus
Processor features	<i>Some:</i> Hyper-Threading (HT) technology
L2 cache	<b>1MB or 2MB</b> std and max / ECC / full speed
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket
Memory - std/max <sup>9</sup>	<b>512MB or 1GB std / 4GB max / DDR2 only</b>
Memory	Four 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G / 400MHz / supports dual independent display</li> <li><b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>128MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>
SATA disk	<b>40, 80 or 160GB</b> / SATA150 7200 rpm / vibration dampening mounts
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370)
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard
Diskette drive	<i>Some:</i> 3.5" 1.44MB diskette drive
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software
Beeper	One internal speaker for business audio
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant
Keyboard (one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black
Mouse	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black
Cooling fans	Optical Wheel Mouse (USB only), 400 dpi, black
Power supply	Two variable speed fans (front and power supply)
	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs

<b>Tower</b>
<ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>
Bay ① 5.25", HH 1.6", access, std optical
Bay ② 5.25", HH 1.6", access, open
Bay ③ 3.5", SL 1", access, std diskette
Bay ④ 3.5", SL 1", no access, std disk
Slot 1: full-length, full-height, PCI Express x16 (75w max) <sup>*</sup>
Slot 2: full-length, full-height, PCI Express x1
Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)
Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)
<sup>*</sup> slot used by adapter in some models



<b>SECURITY</b>
<ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> <li><i>Some:</i> fingerprint reader keyboard</li> </ul>

Supports ThinkVantage® technologies; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	<b>LIMITED WARRANTY<sup>1</sup></b>
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	<ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
Preloaded (only some listed)	1GB PC2-5300 CL5 NP DDR2 UDIMM	
<i>Some:</i> contains additional module with a specialized education preload image in the base preload package	2GB PC2-5300 CL5 NP DDR2 UDIMM	
<i>Some:</i> contains additional module with a specialized education preload image in the base preload package	250GB Serial ATA300 Disk (7200 rpm)	
• Rescue and Recovery™	Super Multi-Burner DL DVD±RW Drive	
• Multimedia Center for Think Offerings (CD-RW, combo, DVD models)	USB 2.0 Essential Memory Key 2GB	
• RecordNow and DLA (CD-RW, combo)	Lenovo Laser Mouse (USB, PS/2)	
• InterVideo WinDVD (combo, DVD)	DVI-I PCIe Connection Adapter (ADD2)	
	ATI® RADEON® X300 SE 128MB Dual Head	
	ATI X1300 256MB Dual Head/TV-out	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information

<sup>14</sup> US models announced on June 6, 2006; previous models on Nov 8, 2005 and Feb 21, 2006 and Apr 5, 2006

# ThinkCentre® M52 Tower (8113) - Pentium 4 (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Memory*	Diskette drive	SATA disk	EIDE optical	Graphics	Intel IAMT	Key-board	Vista™ capable	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8113-5BU	4x4	Pentium® 4 531	3.00 1MB	800	1GB	Diskette	80G	Combo	GMA 950	No	Pref	Yes	3-yr	Educ	Aug 06
M52	8113-5CU	4x4	Pentium 4 531	3.00 1MB	800	512MB	Diskette	80G	DVD	GMA 950	No	Pref	Yes	3-yr	Educ	Aug 06
M52	8113-67U	4x4	Pentium 4 541	3.20 1MB	800	512MB	Diskette	80G	DVD	GMA 950	No	Pref	Yes	3-yr		Aug 06
M52	8113-68U	4x4	Pentium 4 541	3.20 1MB	800	1GB	Diskette	80G	Combo	GMA 950	No	Pref	Yes	3-yr		Aug 06

Processor	Intel® Pentium 4 Processor 531 or 541 with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, 800MHz system bus, and 1MB L2 cache										<b>Tower</b>		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket										<ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7"D X 17.0"H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>		
Memory - std/max <sup>5</sup>	512MB or 1GB std / 4GB max / DDR2 / only										<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6", access, open</li> <li>Bay ③ 3.5", SL 1", access, std diskette</li> <li>Bay ④ 3.5", SL 1", no access, std disk</li> </ul>		<b>SECURITY</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>
Memory	Two 240-pin gold plated DIMM sockets / model 5BU: two sockets used (512MB per socket); other models: one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable										<ul style="list-style-type: none"> <li>Slot 1: full-length, full-height, PCI Express x16 (75w max)</li> <li>Slot 2: full-length, full-height, PCI Express x1</li> <li>Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</li> </ul>		
Graphics (one of following)	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945G GMCH / uses main memory / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter												
SATA disk	80GB / SATA300 7200 rpm / vibration dampening mounts												
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7												
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar												
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer												
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo												
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)												
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard												
Diskette drive	Some: 3.5" 1.44MB diskette drive												
Chipset	Intel 945G Express Chipset / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keyboard, mouse, auto-thermal controls, hardware event log												
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)												
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software												
Beeper	One internal speaker for business audio												
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1												
Security chip	Trusted Platform Module / in NS PC8375S chip / TCG 1.2-compliant												
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black												
Cooling fans	Two variable speed fans (front and power supply)												
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs												
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>										Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>		
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM										73P4983		
<b>Preloaded</b> (only some listed)	1GB PC2-5300 CL5 NP DDR2 UDIMM										73P4984		
• Education models: VitalSource Library education software	2GB PC2-5300 CL5 NP DDR2 UDIMM										73P4985		
• Education models: Adobe® Photoshop® Elements plus Adobe Premiere® Elements	160GB Serial ATA300 Disk (7200 rpm)										09N4254		
• Rescue and Recovery™	250GB Serial ATA300 Disk (7200 rpm)										41N3015		
• Client Security Solution™	Super Multi-Burner DL DVD±RW Drive										41N5581		
• ThinkVantage Productivity Center	USB Portable Diskette Drive										05K9276		
• ThinkVantage System Update	USB Fingerprint Reader										41U3167		
• ThinkVantage Fingerprint Software (fingerprint models)	USB Gemplus GemPC Smart Card Reader										41N3040		
• Symantec® Client Security™	USB 2.0/Analog Headset by Sennheiser										40Y8518		
• Diskeeper Lite	USB 2.0 Lenovo Webcam										40Y8519		
• PC-Doctor™ (diagnostics)	USB 2.0 Memory Key 1GB										40Y7421		
• Google Toolbar	USB 2.0 Essential Memory Key 2GB										41U4944		
• Google Desktop	USB 2.0 CD-RW/DVD-ROM Combo II Drive										40Y8637		
• Picasa from Google	USB 2.0 Portable 120GB Hard Disk										41N8379		
• Multimedia Center for Think Offerings (combo, DVD)	USB 2.0 Super Multi-Burner Drive										41N5565		
• Sonic RecordNow and Drive Letter Access (combo)	Lenovo L191 19" Monitor (black)										6135AB1		
• InterVideo WinDVD (combo, DVD)	Lenovo L192 Wide 19" Monitor (black)										6920AB1		
<b>CD</b>	ThinkVision® L171p 17" Monitor (black)										9417HC2		
• Education models: Adobe Photoshop Elements plus Adobe Premiere Elements	ThinkVision L201p 20.1" Monitor (black)										9220HB1		
<b>License</b> - CD not included	USB Optical Wheel Mouse (black)										06P4069		
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ScrollPoint® Pro Optical Mouse (black)										31P8700		
	Optical 3-button ScrollPoint Mouse (black)										31P7405		
	Lenovo Laser Mouse (USB, PS/2)										41U3074		
	Kensington® MicroSaver® Desktop Lock										06P3839		
	Preferred Pro USB Fingerprint Keyboard										73P4730		
	DVI-I PCIe Connection Adapter (ADD2)										73P2516		
	ATI® RADEON® X300 SE 128MB Dual Head										41U4813		
	ATI X1300 256MB Dual Head/TV-out										41U5028		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												
											<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>		

See footnotes for important warranty information  
US models announced August 22, 2006  
US models withdrawn effective June 2007

# ThinkCentre® M52 Tower (8113) - Pentium D - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Virtual Tech	Dual core	Memory <sup>8</sup>	SATA disk	EIDE optical	Intel Graphics	Cover IAMT switch	Preload Vista™ capable	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8113-F8U	4x4	Pentium® D 820	2.80	2x1MB		Dual	512MB	80GB <sup>2</sup>	Combo	GMA		XP Pro	Yes	3-yr	Jun 05
M52	8113-FBU	4x4	Pentium D 820	2.80	2x1MB		Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	Jun 05
M52	8113-G7U	4x4	Pentium D 820	2.80	2x1MB		Dual	512MB	80GB	Combo	GMA		XP Pro	Yes	3-yr	Educ Aug 06
M52	8113-J3U	4x4	Pentium D 920	2.80	2x2MB	Yes	Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	Apr 06
M52	8113-JDU	4x4	Pentium D 925	3.00	2x2MB		Dual	512MB	80GB	DVD	GMA	Yes	XP Pro	Yes	3-yr	Sep 06
M52	8113-JEU	4x4	Pentium D 925	3.00	2x2MB		Dual	512MB	80GB	Combo	GMA		XP Pro	Yes	3-yr	Sep 06
M52	8113-K3U	4x4	Pentium D 930	3.00	2x2MB	Yes	Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	Apr 06
M52	8113-K4U	4x4	Pentium D 930	3.00	2x2MB	Yes	Dual	1GB	80GB	Combo	GMA		XP Pro	Yes	3-yr	Apr 06
M52	8113-95U	4x4	Pentium D 945	3.40	2x2MB		Dual	512MB	80GB	Combo	GMA IAMT		XP Pro	Yes	3-yr	Aug 06
M52	8113-96U	4x4	Pentium D 945	3.40	2x2MB		Dual	512MB	80GB	Combo	GMA		XP Pro	Yes	3-yr	Aug 06
M52	8113-97U	4x4	Pentium D 945	3.40	2x2MB		Dual	1GB	80GB	Combo	GMA		XP Pro	Yes	3-yr	Aug 06
M52	8113-98U	4x4	Pentium D 945	3.40	2x2MB		Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	Aug 06
M52	8113-9FU	4x4	Pentium D 945	3.40	2x2MB		Dual	512MB	160GB	DVD±RW	GMA		XP Pro	Yes	3-yr	Educ Aug 06
M52	8113-9GU	4x4	Pentium D 945	3.40	2x2MB		Dual	1GB	80GB	DVD	GMA		XP Pro	Yes	3-yr	WH G Nov 06

Positioning	<b>Stability and manageability for the enterprise</b> <b>Intel® Pentium D Processor 820 with dual-core</b> , EM64T, Execute Disable Bit, and 800MHz system bus with <b>2x1MB L2 cache</b> or <b>Intel Pentium D Processor 920, 925, 930, or 945 with dual-core</b> , Virtualization Technology (920/930), EM64T, Execute Disable Bit, EIST, and 800MHz system bus with <b>2x2MB L2 cache</b> Processor and L2 cache in FC-LGA4 or LGA6 in LGA775 socket										<div style="border: 1px solid black; padding: 5px;"> </div>							
Processor															<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7"D X 17.0"H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>			
Implementation																		
Memory - std/max <sup>8</sup>	<b>512MB or 1GB std / 4GB max / DDR2 only</b>																	
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable																	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter										Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk							
SATA disk	<b>80 or 160GB</b> / SATA300 7200 rpm / vibration dampening mounts										<b>Slot 1:</b> full-length, full-height, PCI Express x16 (75w max) <b>Slot 2:</b> full-length, full-height, PCI Express x1 <b>Slot 3:</b> full-length, full-height, 32-bit PCI 2.3 (5v) <b>Slot 4:</b> full-length, full-height, 32-bit PCI 2.3 (5v)							
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7																	
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar																	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE																	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo																	
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370)																	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)										<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch</li> </ul>							
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard																	
Diskette drive	3.5" 1.44MB diskette drive																	
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log																	
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																	
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)																	
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software																	
Speaker	One internal speaker for business audio																	
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot																	
IAMT	<i>Some:</i> Intel Active Management Technology (IAMT)										Supports ThinkVantage® technologies							
Modem	None																	
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant										<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↩ <b>3-year parts and labor</b></li> <li>↩ <b>International Warranty Service<sup>9</sup></b></li> <li>↩ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↩ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> </ul> </li> <li>↩ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↩ <b>Post warranty maintenance services available</b></li> <li>↩ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>							
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																	
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs																	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b> Microsoft® Windows® XP Professional 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Super Multi-Burner DL DVD±RW Drive 41N5581 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L192 Wide 19" Monitor (black) 6920AB1 Lenovo D221 Wide 22" Monitor (black) 6622HB1 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 Lenovo Laser Mouse (USB, PS/2) 41U3074 DVI-I PCIe Connection Adapter (ADD2) 73P2516 ATI® RADEON® X300 SE 128MB Dual Head 41U4813 ATI X1300 256MB Dual Head/TV-out 41U5028 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>																	

See footnotes for important warranty information  
 US models announced on Jun 28, 2005, Apr 4, Aug 22, Sep 26, and Nov 7, 2006  
 US models withdrawn effective June 2007

# ThinkCentre® M52 Desktop (8212) - Celeron - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Bus MHz	Hyper-Thread	Memory <sup>6</sup>	SATA disk	EIDE optical	Graphics	Chipset	Cover switch	Floor stand	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8212-A1U	3x3	Celeron® D 331	2.66	256K	533	No	256MB	40GB <sup>2</sup>	CD	GMA 950	945G	No	Yes	XP Pro	3-yr	No	Aug 05
M52	8212-A2U	3x3	Celeron D 336	2.80	256K	533	No	512MB	40GB	CD	GMA 950	945G	No	Yes	XP Pro	3-yr	No	Aug 05
M52	8212-A3U	3x3	Celeron D 346	3.06	256K	533	No	512MB	40GB	CD	GMA 950	945G	No	Yes	XP Pro	3-yr	No	Aug 05

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Celeron D Processor 331 (2.66GHz), 336 (2.80GHz), 346 (3.06GHz)</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus										<b>Desktop</b>								
L2 cache Implementation	<b>256KB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										Bay ① 5.25", HH 1.6", access, std or opt optical		Bay ② 3.5", SL 1", access, std or opt diskette						
Memory - std/max <sup>8</sup> Memory	<b>256 or 512MB std</b> / 4GB max / <b>DDR2 only</b> Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable										Bay ③ 3.5", SL 1", no access, std disk		Slot 1: full-length (170mm), low-profile, PCI Express x16 (25w max), supports optional ADD2 card						
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector										Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v)		Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)						
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts										• Business black color; metal case		• 13.8" W X 15.2"D X 4.2"H						
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7										• 350mm W X 385mm D X 108mm H		• With vertical stand: 5.9" W X 15.2"D X 15.0"H						
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar										• With vertical stand: 150mm W X 385mm D X 380mm H		• 18.5 to 22.0 lb (8.4 to 10.0 kg)						
EIDE CD	48X-20X <sup>4</sup> CD-ROM										• All three bays flip up (latched and pivoting)		• Toolless cover flips up and tilts backward on rear hinges						
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)										• Toolless disk, diskette drive, optical drive removal		• Two slots on riser card (PCI)						
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard										• Toolless systemboard and adapter retention		• Steel chassis supports 100 lb (45kg) monitor on top						
Diskette drive	3.5" 1.44MB diskette drive										• System floor stand for vertical orientation (ships std)								
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log										• PC 2001-compliant		• ACPI 2.0c-compliant						
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										• SMBIOS 2.3.4-compliant		• DMI 2.0-compliant						
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										• SMBus 2.0-compliant		• Asset ID <sup>19</sup> (system specific info in chip)						
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)										<b>SECURITY</b>								
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software										• Security chip (see information on left)								
Speaker	One internal speaker for business audio										• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons								
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot										• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)								
Modem	None										• Power-on password								
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant										• Administrator password								
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), blk										• Hard disk password (user and master)								
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black										• Boot sequence control								
Cooling fans	Three variable speed fans (two front and one power supply)										• Boot without keyboard, mouse, diskette								
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs										• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable								
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> • Access Program • Rescue and Recovery™ • Adobe Reader • Norton AntiVirus (OEM version) • PC-Doctor™ (diagnostics) • Client Security Software <b>Downloadable</b> • Software Delivery Assistant • System Migration Assistant • IBM Director Agent <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client										<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 160GB Serial ATA300 Disk (7200 rpm) 09N4254 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 41U3167 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Memory Key 512MB 40Y8596 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L191 19" Monitor (black) 6135AB1 Lenovo L192 Wide 19" Monitor (black) 6920AB1 Lenovo D221 Wide 22" Monitor (black) 6622HB2 ThinkVision® L171 17" Monitor (black) 9417AC1 ThinkVision L171p 17" Monitor (black) 9417HC2 ThinkVision L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 ScrollPoint® Pro Optical Mouse (black) 31P8700 Lenovo Laser Mouse (USB, PS/2) 41U3074 Enhanced Performance USB Keyboard 73P2620 Preferred Pro USB Fingerprint Keyboard 73P4730 Kensington® MicroSaver® Desktop Lock 06P3839 DVI-I PCIe Connection Adapter (ADD2) 73P2516 ATI® RADEON® X300 SE 128MB Dual Head 41U4813 ATI X1300 256MB Dual Head/TV-out 41U5028 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>									

See footnotes for important warranty information  
US models announced August 23, 2005  
US models withdrawn effective June 2007

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# ThinkCentre® M52 Desktop (8212) - Pentium 4 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	Execute disable	Memory*	Diskette drive	SATA disk	EIDE optical	Cover Graphics switch	Intel AMT board	Key-board	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8212-21U 3x3	Pentium® 4 516	2.93	1MB	533		512MB	Dskte	40GB <sup>2</sup>	CD	GMA		Pref	3-year		Aug05
M52	8212-22U 3x3	Pentium 4 516	2.93	1MB	533		512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Aug05
M52	8212-23U 3x3	Pentium 4 519	3.06	1MB	533		512MB	Dskte	40GB	CD	GMA		Pref	3-year		Aug05
M52	8212-24U 3x3	Pentium 4 519	3.06	1MB	533		512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Aug05
M52	8212-29U 3x3	Pentium 4 521	2.80	1MB	800	HT	512MB		80GB	CD	GMA		Pref	3-year		Jun06
M52	8212-2AU 3x3	Pentium 4 521	2.80	1MB	800	HT	512MB		80GB	Combo	GMA		Pref	3-year		Jun 06
M52	8212-12U 3x3	Pentium 4 531	3.00	1MB	800	HT	512MB	Dskte	40GB	CD	GMA		Pref	3-year		Aug05
M52	8212-13U 3x3	Pentium 4 531	3.00	1MB	800	HT	512MB	Dskte	80GB	Combo	GMA		Pref	3-year		Aug05
M52	8212-15U 3x3	Pentium 4 531	3.00	1MB	800	HT	512MB	Dskte	80GB	DVD	GMA	Switch	Finger	3-year		Aug05
M52	8212-16U 3x3	Pentium 4 531	3.00	1MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year	W G	Aug05
M52	8212-1DU 3x3	Pentium 4 541	3.20	1MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year	G	Aug05
M52	8212-1MU 3x3	Pentium 4 551	3.40	1MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Aug05
M52	8212-1QU 3x3	Pentium 4 630	3.00	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year	G	Aug05
M52	8212-1YU 3x3	Pentium 4 630	3.00	2MB	800	HT	512MB	Dskte	80GB	Combo	GMA		Pref	3-year		Aug05
M52	8212-1H1U 3x3	Pentium 4 630	3.00	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA	IAMT	Pref	3-year	G	Aug05
M52	8212-1SU 3x3	Pentium 4 640	3.20	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Aug05
M52	8212-1U1U 3x3	Pentium 4 640	3.20	2MB	800	HT	512MB	Dskte	40GB	CD	GMA		Pref	3-year		Aug05
M52	8212-2U2U 3x3	Pentium 4 640	3.20	2MB	800	HT	512MB	Dskte	80GB	Combo	GMA		Pref	3-year		Aug05
M52	8212-1VU 3x3	Pentium 4 650	3.40	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Aug05
M52	8212-F1U 3x3	Pentium 4 650	3.40	2MB	800	HT	512MB	Dskte	40GB	CD	GMA		Pref	3-year		Aug05
M52	8212-F2U 3x3	Pentium 4 650	3.40	2MB	800	HT	512MB	Dskte	80GB	Combo	GMA		Finger	3-year		Aug05
M52	8212-H2U 3x3	Pentium 4 630	3.00	2MB	800	HT	512MB		40GB	CD	GMA		Pref	3-year		Nov05
M52	8212-E7U 3x3	Pentium 4 640	3.20	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year	G	Nov05
M52	8212-L4U 3x3	Pentium 4 661	3.60	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year		Jan 06
M52	8212-L6U 3x3	Pentium 4 661	3.60	2MB	800	HT	1GB	Dskte	80GB	Combo	GMA		Pref	3-year		Jan 06
M52	8212-H9U 3x3	Pentium 4 630	3.00	2MB	800	HT	512MB	Dskte	80GB	DVD	GMA		Pref	3-year	Educ	Apr 06
M52	8212-EBU 3x3	Pentium 4 640	3.20	2MB	800	HT	512MB	Dskte	80GB	Combo	GMA		Pref	3-year	Educ	Apr 06

Processor	Intel® Pentium 4 Processor 516, 519, 521, 531, 541, 551, 630, 640 650, or 661 with single-core, EM64T, and 533 or 800MHz bus	Desktop	
Processor features	Some: Hyper-Threading (HT) technology, Execute Disable Bit (XD)	Bay ① 5.25", HH 1.6", access, std or opt optical Bay ② 3.5", SL 1", access, std or opt diskette Bay ③ 3.5", SL 1", no access, std disk Slot 1: full-length (170mm), low-profile, PCI Express x16 (25w max), supports optional ADD2 card Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)	
L2 cache	1MB or 2MB std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>5</sup>	512MB or 1GB std / 4GB max / DDR2 only		
Memory	Four 240-pin gold plated DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics / uses main memory / 400MHz / one 15-pin analog connector		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.8" W X 15.2" D X 4.2" H</li> <li>• 350mm W X 385mm D X 108mm H</li> <li>• With vertical stand: 5.9" W X 15.2" D X 15.0" H</li> <li>• With vertical stand: 150mm W X 385mm D X 380mm H</li> <li>• 18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>• All three bays flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI)</li> <li>• Toolless systemboard and adapter retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation (ships std)</li> </ul>
SATA disk	40 or 80GB / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>4</sup> CD-RW/DVD-ROM Combo		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	Some: 3.5" 1.44MB diskette drive		
Chipset	Intel 945G Express Chipset / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1		
Intel AMT	Some: Intel Active Management Technology (IAMT)		
Security chip	Trusted Platform Module / in NS PC8375S chip / TCG 1.2-compliant	<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• Some: cover intrusion switch</li> <li>• Some: fingerprint reader keyboard</li> </ul>	
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black (one of following)		
Mouse	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), blk Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Three variable speed fans (two front and one power supply)		
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional <b>Preloaded</b> (only some listed) • Some: contains additional module with a specialized education preload image in the base preload package • Multimedia Center for Think Offerings (DVD, combo models) • RecordNow and DLA (combo models) • InterVideo WinDVD (combo models)		<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 USB 2.0 Essential Memory Key 2GB 41U4944 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 DVI-I PCIe Connection Adapter (ADD2) 73P2516 ATI® RADEON® X300 SE 128MB Dual Head 41U4813 ATI X1300 256MB Dual Head/TV-out 41U5028 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced on Aug 23, 2005, Nov 8, 2005, Jan 24, 2006, April 4, 2006 and June 6, 2006  
US models withdrawn effective May 2006 or June 2007

# ThinkCentre® M52 Desktop (8212) - Pentium 4 (Aug 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Threading	Execute disable	Memory*	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Key-board	Limited warranty¹	Workhorse Gbl, Educ	Avail date
M52	8212-3BU	3x3	Pentium® 4 531	3.00	1MB	800	HT	XD	512MB	Dskte	80GB	DVD	GMA 950	No	Pref	3-year	Educ	Aug 06
M52	8212-44U	3x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	Dskte	80GB	DVD	GMA 950	No	Pref	3-year		Aug 06
M52	8212-45U	3x3	Pentium 4 541	3.20	1MB	800	HT	XD	1GB	Dskte	80GB	Combo	GMA 950	No	Pref	3-year		Aug 06

Positioning Processor	Stability and manageability for the enterprise <b>Intel® Pentium 4 Processor 531 or 541</b> with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit (XD), 800MHz system bus, and <b>1MB L2 cache</b>								Desktop										
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket								Bay ① 5.25", HH 1.6", access, std or opt optical Bay ② 3.5", SL 1", access, std or opt diskette Bay ③ 3.5", SL 1", no access, std disk Slot 1: full-length (170mm), low-profile, PCI Express x16 (25w max), supports optional ADD2 card Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)										
Memory - std/max Memory	<b>512MB or 1GB std</b> / 4GB max / <b>DDR2 only</b> Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable								<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.8" W X 15.2"D X 4.2"H</li> <li>• 350mm W X 385mm D X 108mm H</li> <li>• With vertical stand: 5.9" W X 15.2"D X 15.0"H</li> <li>• With vertical stand: 150mm W X 385mm D X 380mm H</li> <li>• 18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>• All three bays flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI)</li> <li>• Toolless systemboard and adapter retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation (ships std)</li> </ul>										
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector								<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>										
SATA disk SATA controller SATA cables EIDE DVD EIDE Combo EIDE controller EIDE cables Diskette drive	<b>80GB</b> / SATA300 7200 rpm / vibration dampening mounts Serial ATA / 300 MB/sec SATA300 / integrated in ICH7 One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar <i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 2-drop EIDE cable to optical / one connector on systemboard 3.5" 1.44MB diskette drive								• Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>										
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log								<b>LIMITED WARRANTY¹</b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>										
Front ports Rear ports Rear audio ports Audio Speaker Ethernet Security chip	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software One internal speaker for business audio Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 <b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant								Keyboard 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Mouse Optical Wheel Mouse (USB only), 400 dpi, black Cooling fans Three variable speed fans (two front and one power supply) Power supply 225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs										
Preload with Windows XP Professional <sup>5</sup> Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 160GB Serial ATA300 Disk (7200 rpm) 09N4254 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 41U3167 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Memory Key 512MB 40Y8596 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L191 19" Monitor (black) 6135AB1 Lenovo L192 Wide 19" Monitor (black) 6920AB1 Lenovo D221 Wide 22" Monitor (black) 6622HB2 ThinkVision® L171p 17" Monitor (black) 9417HC2 ThinkVision L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock 06P3839 Enhanced Performance USB Keyboard 73P2620 Preferred Pro USB Fingerprint Keyboard 73P4730 ScrollPoint® Pro Optical Mouse (black) 31P8700 Lenovo Laser Mouse (USB, PS/2) 41U3074 DVI-I PCIe Connection Adapter (ADD2) 73P2516 ATI® X1300 256MB Dual Head/TV-out 41U5028 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>								Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>										
Preloaded • Education model: VitalSource Library education software • Education model: Adobe® Photoshop® Elements plus Adobe Premiere® Elements • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • Symantec® Client Security™ • DiskKeeper Lite • PC-Doctor™ (diagnostics) • Google Toolbar • Google Desktop • Picasa from Google • Multimedia Center for Think Offerings (Combo, DVD) • Sonic RecordNow and Drive Letter Access (Combo, DVD) • InterVideo WinDVD (combo, DVD)									CD • Education model: Adobe Photoshop Elements plus Adobe Premiere Elements <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client										

See footnotes for important warranty information  
US models announced August 1, 2006  
US models withdrawn effective June 2007

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(VR3-3) June 2007



# ThinkCentre® M52 Desktop (8212) - Pentium D - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Dual core	Memory <sup>a</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Intel IAMT	Floor stand	Vista™ capable	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8212-G1U	3x3	Pentium® D 820	2.80	2x1MB	Dual	512MB	Dskte	80GB <sup>2</sup>	Combo	GMA		Yes	Yes	3-year		Aug 05
M52	8212-G2U	3x3	Pentium D 820	2.80	2x1MB	Dual	512MB	Dskte	80GB	DVD	GMA		Yes	Yes	3-year		Aug 05
M52	8212-G3U	3x3	Pentium D 820	2.80	2x1MB	Dual	512MB	Dskte	80GB	Combo	GMA		No	Yes	3-year		Nov 05
M52	8212-G9U	3x3	Pentium D 820	2.80	2x1MB	Dual	512MB	Dskte	80GB	DVD	GMA		Yes	Yes	3-year		Aug 06
M52	8212-GAU	3x3	Pentium D 820	2.80	2x1MB	Dual	512MB	Dskte	80GB	Combo	GMA		Yes	Yes	3-year	Educ	Aug 06
M52	8212-J3U	3x3	Pentium D 920	2.80	2x2MB	Dual	512MB	Dskte	80GB	DVD	GMA		Yes	Yes	3-year		Jan 06
M52	8212-JCU	3x3	Pentium D 925	3.00	2x2MB	Dual	512MB		80GB	DVD	GMA		Yes	Yes	3-year		Sep 06
M52	8212-JDU	3x3	Pentium D 925	3.00	2x2MB	Dual	1GB		80GB	Combo	GMA		Yes	Yes	3-year		Sep 06
M52	8212-K3U	3x3	Pentium D 930	3.00	2x2MB	Dual	512MB	Dskte	80GB	DVD	GMA		Yes	Yes	3-year		Jan 06
M52	8212-K4U	3x3	Pentium D 930	3.00	2x2MB	Dual	1GB	Dskte	80GB	Combo	GMA		Yes	Yes	3-year		Jan 06
M52	8212-84U	3x3	Pentium D 945	3.40	2x2MB	Dual	512MB	Dskte	80GB	Combo	GMA IAMT		Yes	Yes	3-year		Aug 06
M52	8212-85U	3x3	Pentium D 945	3.40	2x2MB	Dual	1GB	Dskte	80GB	Combo	GMA		Yes	Yes	3-year	Gbl	Aug 06
M52	8212-86U	3x3	Pentium D 945	3.40	2x2MB	Dual	512MB	Dskte	80GB	DVD	GMA IAMT		Yes	Yes	3-year	Gbl	Aug 06
M52	8212-87U	3x3	Pentium D 945	3.40	2x2MB	Dual	512MB	Dskte	80GB	DVD	GMA		Yes	Yes	3-year		Aug 06
M52	8212-8CU	3x3	Pentium D 945	3.40	2x2MB	Dual	512MB	Dskte	160GB	DVD±RW	GMA		Yes	Yes	3-year	Educ	Aug 06

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium D Processor 820 with dual-core</b> , EM64T, Execute Disable Bit, and 800MHz bus with <b>2x1MB</b> L2 cache or <b>Intel Pentium D Processor 920, 925, 930, or 945 with dual-core</b> , Virtualization Technology (920/930), EM64T, Execute Disable Bit, EIST, and 800MHz system bus with <b>2x2MB</b> L2 cache	<b>Desktop</b>	
Implementation	Processor and L2 cache in FC-LGA4 or LGA61 in LGA775 socket	Bay ① 5.25", HH 1.6", access, std or opt optical Bay ② 3.5", SL 1", access, std or opt diskette Bay ③ 3.5", SL 1", no access, std disk	
Memory - std/max <sup>5</sup>	<b>512MB or 1GB std / 4GB max / DDR2 only</b>	Slot 1: full-length (170mm), low-profile, PCI Express x16 (25w max), supports optional ADD2 card	
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory / 400MHz / one 15-pin analog D-sub connector	<ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>13.8" W X 15.2"D X 4.2"H</li> <li>350mm W X 385mm D X 108mm H</li> <li>With vertical stand: 5.9" W X 15.2"D X 15.0"H</li> <li>With vertical stand: 150mm W X 385mm D X 380mm H</li> <li>18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>All three bays flip up (latched and pivoting)</li> <li>Toolless cover flips up and tilts backward on rear hinges</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Two slots on riser card (PCI)</li> <li>Toolless systemboard and adapter retention</li> <li>Steel chassis supports 100 lb (45kg) monitor on top</li> <li>Floor stand for vertical orientation (some models)</li> </ul>	
SATA disk	<b>80 or 160GB</b> / SATA300 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370)		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	<i>Some:</i> 3.5" 1.44MB diskette drive		
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot		
IAMT	<i>Some:</i> Intel Active Management Technology (IAMT)		
Modem	None		
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), blk		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		

<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
<b>Preloaded</b> (only some listed)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
• <i>Education models:</i> VitalSource Library education software	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985
• <i>Education models:</i> Adobe® Photoshop® Elements plus Adobe Premiere® Elements	250GB Serial ATA300 Disk (7200 rpm)	41N3015
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW Drive	41N5581
• ThinkVantage System Update	USB 2.0 Lenovo Webcam	40Y8519
• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)	USB 2.0 Essential Memory Key 2GB	41U4944
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637
• InterVideo WinDVD (combo, DVD, DVD±RW)	USB 2.0 Portable 120GB Hard Disk	41N8379
• InterVideo WinDVD Creator (DVD±RW)	USB 2.0 Super Multi-Burner Drive	41N5565
<b>CD</b>	Lenovo L192 Wide 19" Monitor (black)	6920AB1
• <i>Education models:</i> Adobe Photoshop Elements plus Adobe Premiere Elements	ThinkVision® L171p 17" Monitor (black)	9417HC2
	ThinkVision L201p 20.1" Monitor (black)	9220HB1
	Enh Perf Wireless Keyboard and Mouse	73P4067
	Preferred Pro USB Fingerprint Keyboard	73P4730
	DVI-I PCIe Connection Adapter (ADD2)	73P2516
	ATI® RADEON® X300 SE 128MB Dual Head	41U4813
	ATI X1300 256MB Dual Head/TV-out	41U5028
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
		Supports ThinkVantage® technologies
		<b>LIMITED WARRANTY<sup>1</sup></b>
		⇒ <b>3-year parts and labor</b>
		⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>
		⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>
		• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus™ part number 41C9193)
		• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)
		⇒ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>
		⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b>

See footnotes for important warranty information  
US models announced on Aug 23, 2005, Nov 8, 2005, Jan 24, Aug 1, Aug 22, and Sep 26, 2006  
US models withdrawn effective June 2007

# ThinkCentre® M52 Small (8215) - Celeron - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache GHz	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Chipset	Cover switch	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date	
<b>M52</b>	8215-A1U	2x3	Celeron® D 331	2.66	256K	533	No	256MB	40GB <sup>2</sup>	CD	GMA 950	945G	No	XP Pro	3-yr	No	Jun 05
<b>M52</b>	8215-A2U	2x3	Celeron D 336	2.80	256K	533	No	512MB	40GB	CD	GMA 950	945G	No	XP Pro	3-yr	No	Jun 05
<b>M52</b>	8215-B2U	2x3	Celeron D 346	3.06	256K	533	No	512MB	40GB	CD	GMA 950	945G	No	XP Pro	3-yr	No	Jun 05
Positioning	<i>Stability and manageability for the enterprise</i>										<b>Small</b>						
Processor	<b>Intel® Celeron D Processor 331 (2.66GHz), 336 (2.80GHz), 346 (3.06GHz)</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus																
L2 cache Implementation	<b>256KB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket										Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)						
Memory - std/max <sup>8</sup>	<b>256 or 512MB std</b> / 4GB max / <b>DDR2 only</b>										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand for vertical orientation</li> </ul>						
Memory	Two 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable																
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector																
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts																
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7																
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar																
EIDE CD	48X-20X <sup>4</sup> CD-ROM																
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)																
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard																
Diskette drive	3.5" 1.44MB diskette drive																
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log										<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• ACPI 2.0c-compliant</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• SMBus 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip)</li> </ul>						
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)																
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software																
Speaker	One internal speaker for business audio																
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot																
Modem	None																
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant										<p style="text-align: center;"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)                             <ul style="list-style-type: none"> <li>- optional cable also locks the cover by deactivating the cover release buttons</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>						
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																
Cooling fans	Three variable speed fans (two front and one power supply)																
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs																
<b>Preload with Windows XP Professional<sup>5</sup></b>											<b>Accessories</b>						
Microsoft® Windows® XP Professional with Service Pack 2											512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983						
- Disk-to-Disk Recovery (in hidden protected area)											1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984						
<b>Preloaded</b>											2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985						
• Access Program											160GB Serial ATA300 Disk (7200 rpm) 09N4254						
• Rescue and Recovery™											250GB Serial ATA300 Disk (7200 rpm) 41N3015						
• Adobe Reader											Super Multi-Burner DL DVD±RW Drive 41N5581						
• Norton AntiVirus (OEM version)											USB Portable Diskette Drive 05K9276						
• PC-Doctor™ (diagnostics)											USB Fingerprint Reader 41U3167						
• Client Security Software											USB Gemplus GemPC Smart Card Reader 41N3040						
<b>Downloadable</b>											USB 2.0/Analog Headset by Sennheiser 40Y8518						
• Software Delivery Assistant											USB 2.0 Lenovo Webcam 40Y8519						
• System Migration Assistant											USB 2.0 Memory Key 512MB 40Y8596						
• IBM Director Agent											USB 2.0 Memory Key 1GB 40Y7421						
<b>License</b> - CD not included											USB 2.0 Essential Memory Key 2GB 41U4944						
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client											USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637						
											USB 2.0 Portable 120GB Hard Disk 41N8379						
											USB 2.0 Super Multi-Burner Drive 41N5565						
											Lenovo L191 19" Monitor (black) 6135AB1						
											Lenovo L192 Wide 19" Monitor (black) 6920AB1						
											Lenovo D221 Wide 22" Monitor (black) 6622HB2						
											ThinkVision® L171p 17" Monitor (black) 9417HC2						
											ThinkVision L192p 19" Monitor (black) 9419HC2						
											ThinkVision L201p 20.1" Monitor (black) 9220HB1						
											ScrollPoint Pro Optical Mouse (black) 31P8700						
											Optical 3-button ScrollPoint Mouse (black) 31P7405						
											Lenovo Laser Mouse (USB, PS/2) 41U3074						
											Kensington® MicroSaver® Desktop Lock 06P3839						
											Enhanced Performance USB Keyboard 73P2620						
											Preferred Pro USB Keyboard 73P5220						
											Preferred Pro USB Fingerprint Keyboard 73P4730						
											DVI-I PCIe Connection Adapter (ADD2) 73P2516						
											Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>						
											Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>						
											<b>LIMITED WARRANTY<sup>1</sup></b>						
											<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus™ part number 41C9193)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>						

See footnotes for important warranty information  
US models announced June 28, 2005  
US models withdrawn effective June 2007

# ThinkCentre® M52 Small (8215) - Pentium 4 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Execute disable	Memory <sup>a</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Intel AMT	Key-board warranty	Limited Gbl, Educ	Workhorse Avail
M52	8215-13U	2x3	Pentium® 4 516	2.93	1MB	533		512MB	40GB <sup>2</sup> CD	GMA		Yes	Pref	3-yr	Jun 05		
M52	8215-14U	2x3	Pentium 4 516	2.93	1MB	533		512MB	Diskette 80GB DVD	GMA			Pref	3-yr	Jun 05		
M52	8215-21U	2x3	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	40GB CD	GMA		Pref	3-yr	Jun 05		
M52	8215-22U	2x3	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	Diskette 40GB CD	GMA		Pref	3-yr	Jun 05		
M52	8215-23U	2x3	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		
M52	8215-25U	2x3	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA	Yes	Finger	3-yr	Jun 05		
M52	8215-29U	2x3	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	W G Jun 05		
M52	8215-31U	2x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	Diskette 40GB CD	GMA		Pref	3-yr	Jun 05		
M52	8215-32U	2x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		
M52	8215-34U	2x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	80GB DVD	GMA		Pref	3-yr	Jun 05		
M52	8215-35U	2x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	G Jun 05		
M52	8215-36U	2x3	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA	Yes	Finger	3-yr	Jun 05		
M52	8215-41U	2x3	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	Diskette 40GB CD	GMA		Pref	3-yr	Jun 05		
M52	8215-42U	2x3	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		
M52	8215-44U	2x3	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	80GB DVD	GMA		Pref	3-yr	Jun 05		
M52	8215-45U	2x3	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	Jun 05		
M52	8215-46U	2x3	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA	Yes	Finger	3-yr	Jun 05		
M52	8215-D1U	2x3	Pentium 4 630	3.00	2MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	W G Jun 05		
M52	8215-D6U	2x3	Pentium 4 630	3.00	2MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		
M52	8215-D7U	2x3	Pentium 4 630	3.00	2MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA	IAMT	Pref	3-yr	W G Aug 05		
M52	8215-E1U	2x3	Pentium 4 640	3.20	2MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	Jun 05		
M52	8215-E7U	2x3	Pentium 4 640	3.20	2MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		
M52	8215-F1U	2x3	Pentium 4 650	3.40	2MB	800	HT	XD	512MB	Diskette 80GB DVD	GMA		Pref	3-yr	Jun 05		
M52	8215-F6U	2x3	Pentium 4 650	3.40	2MB	800	HT	XD	512MB	Diskette 80GB	Combo GMA		Pref	3-yr	Jun 05		

Processor	Intel® Pentium 4 Processor 516, 531, 541, 551, 630, 640, or 650 with single-core, EM64T, and 533 or 800MHz system bus	Small	
Processor features	Some: Hyper-Threading (HT) technology, Execute Disable Bit (XD)		
L2 cache	1MB or 2MB std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>a</sup>	512MB std / 4GB max / DDR2 only		
Memory	Two 240-pin gold plated DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945G GMCH / 400MHz / one 15-pin analog connector		
SATA disk	40GB (SATA150) or 80GB (SATA300) / 7200 rpm / rubber vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	Some: 3.5" 1.44MB diskette drive		
Chipset	Intel 945G Express Chipset / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1		
Intel IAMT	Some: Intel Active Management Technology (IAMT)		
Security chip	Trusted Platform Module / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black (one of following) [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Three variable speed fans (two front and one power supply)		
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
Preload with Windows XP Professional <sup>5</sup>	Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery	Accessories	
Preloaded (only some listed)	<ul style="list-style-type: none"> <li>Access Program</li> <li>Rescue and Recovery™</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> <li>Client Security Software</li> <li>RecordNow and DLA (combo models)</li> <li>InterVideo WinDVD (combo models)</li> </ul>	<ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Super Multi-Burner DL DVD±RW Drive 41N5581</li> <li>USB Fingerprint Reader 41U3167</li> <li>USB 2.0 Essential Memory Key 2GB 41U4944</li> <li>Lenovo L192 Wide 19" Monitor (black) 6920AB1</li> <li>Lenovo D221 Wide 22" Monitor (black) 6622HB2</li> <li>ThinkVision® L192p 19" Monitor (black) 9419HC2</li> <li>DVI-I PCIe Connection Adapter (ADD2) 73P2516</li> </ul>	
		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
			Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
			<ul style="list-style-type: none"> <li>3-year parts and labor limited warranty<sup>1</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> </ul>

See footnotes for important warranty information  
US models announced on June 28 and August 23, 2005  
US models withdrawn effective May 2006 or June 2007

# ThinkCentre® M52 Small (8215) - Pentium 4 (Nov 2005) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x model bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	EM64T	Memory <sup>6</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Intel AMT	Key-board	Limited warranty <sup>7</sup>	Workhorse <sup>8</sup>	Avail Gbl, Educ
M52	8215-15U	2x3	Pentium® 4 519K	3.06	1MB	533		EM64T	512MB	40G <sup>2</sup>	CD	GMA	No	No	Pref	3-yr		Nov 05	
M52	8215-16U	2x3	Pentium 4 519K	3.06	1MB	533		EM64T	512MB	80G	Combo	GMA	No	No	Pref	3-yr		Nov 05	
M52	8215-2BU	2x3	Pentium 4 521	2.80	1MB	800	HT	EM64T	512MB	80G	CD	GMA	No	No	Pref	3-yr		Jun 06	
M52	8215-2CU	2x3	Pentium 4 521	2.80	1MB	800	HT	EM64T	512MB	80G	Combo	GMA	No	No	Pref	3-yr		Jun 06	
M52	8215-D9U	2x3	Pentium 4 630	3.00	2MB	800	HT	EM64T	512MB	40G	CD	GMA	No	No	Pref	3-yr		Nov 05	
M52	8215-E9U	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	No	Pref	3-yr	Global	Nov 05
M52	8215-EBU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	No	Finger	3-yr		Nov 05
M52	8215-EEU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	40G	CD	GMA	No	No	Pref	3-yr		Nov 05	
M52	8215-F8U	2x3	Pentium 4 650	3.40	2MB	800	HT	EM64T	512MB	40G	CD	GMA	No	No	Pref	3-yr		Nov 05	
M52	8215-FAU	2x3	Pentium 4 650	3.40	2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	No	Finger	3-yr		Nov 05
M52	8215-DDU	2x3	Pentium 4 630	3.00	2MB	800	HT	EM64T	512MB	Diskette	80G	CD	GMA	No	No	Pref	3-yr		Jan 06
M52	8215-EHU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr		Jan 06
M52	8215-EKU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	1GB	Diskette	160	DVD±RW <sup>6</sup>	GMA	No	No	Pref	3-yr		Jan 06
M52	8215-H4U	2x3	Pentium 4 661	3.60	2MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	No	Pref	3-yr		Jan 06
M52	8215-H6U	2x3	Pentium 4 661	3.60	2MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr		Jan 06
M52	8215-DFU	2x3	Pentium 4 630	3.00	2MB	800	HT	EM64T	512MB	Diskette	80G	CD	GMA	No	No	Pref	3-yr	Educ	Apr 06
M52	8215-DGU	2x3	Pentium 4 630	3.00	2MB	800	HT	EM64T	512MB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr	Educ	Apr 06
M52	8215-ELU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr	Educ	Apr 06
M52	8215-EMU	2x3	Pentium 4 640	3.20	2MB	800	HT	EM64T	512MB	Diskette	80G	DVD±RW	GMA	No	No	Pref	3-yr	Educ	Apr 06
M52	8215-FDU	2x3	Pentium 4 650	3.40	2MB	800	HT	EM64T	512MB	Diskette	160	DVD±RW	GMA	No	No	Pref	3-yr	Educ	Apr 06

Processor	Intel® Pentium 4 Processor 519K, 521, 630, 640, 650, or 661 with single-core, EM64T, Execute Disable Bit, and 533 or 800MHz bus	Small	
Processor features	Some: Hyper-Threading (HT) technology	Bay ① 3.5", slim .5", access, std or opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk	
L2 cache	1MB or 2MB std and max / ECC / full speed	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)	
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
Memory - std/max <sup>5</sup>	512MB or 1GB std / 4GB max / DDR2 only		
Memory	Two 240-pin gold plated DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945G GMCH / 400MHz / one 15-pin analog connector		
SATA disk	40GB (SATA150), 80GB or 160GB (SATA300) / 7200 rpm / rubber vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD±RW	Some: DVD and CD burner / Multi-Burner Plus (part 73P3370)		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	Some: 3.5" 1.44MB diskette drive		
Chipset	Intel 945G Express Chipset / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1		
Intel IAMT	None		
Security chip	Trusted Platform Module / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black (one of following) [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Three variable speed fans (two front and one power supply)		
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		

<p><b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional</p> <p><b>Preloaded</b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Some: contains additional module with a specialized education preload image in the base preload package</li> <li>• Rescue and Recovery™</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Super Multi-Burner DL DVD±RW Drive 41N5581</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB Fingerprint Reader 41U3167</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>USB 2.0 Portable 120GB Hard Disk 41N8379</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>Lenovo L192 Wide 19" Monitor (black) 6920AB1</li> <li>Lenovo D221 Wide 22" Monitor (black) 6622HB2</li> <li>ThinkVision® L192p 19" Monitor (black) 9419HC2</li> <li>DVI-I PCIe Connection Adapter (ADD2) 73P2516</li> </ul> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	<p>Supports ThinkVantage® technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>
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See footnotes for important warranty information  
US models announced Nov 8, 2005 or January 24, April 4, or June 6, 2006  
US models withdrawn effective June 2007

# ThinkCentre® M52 Small (8215) - Pentium 4 (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	EM64T	Memory*	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Intel AMT	Key-board	Limited warranty	Workhorse Gbl, Educ	Avail date
M52	8215-66U	2x3	Pentium® 4 531	3.0	1MB	800	HT	EM64T	512MB	Diskette	80G <sup>2</sup>	DVD	GMA	No	No	Pref	3-yr	Educ	Aug 06
M52	8215-67U	2x3	Pentium 4 531	3.0	1MB	800	HT	EM64T	512MB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr	Educ	Aug 06
M52	8215-68U	2x3	Pentium 4 531	3.0	1MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr	Educ	Aug 06
M52	8215-6AU	2x3	Pentium 4 541	3.2	1MB	800	HT	EM64T	512MB	Diskette	80G	DVD	GMA	No	No	Pref	3-yr		Aug 06
M52	8215-6BU	2x3	Pentium 4 541	3.2	1MB	800	HT	EM64T	1GB	Diskette	80G	Combo	GMA	No	No	Pref	3-yr		Aug 06

Processor	<b>Intel® Pentium 4 Processor 531 or 541</b> with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit, and 800MHz system bus	<b>Small</b>	
L2 cache	<b>1MB</b> std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	Bay ① 3.5", slim .5", access, std diskette	
Memory - std/max <sup>5</sup>	<b>512MB or 1GB std / 4GB max / DDR2 only</b>	Bay ② 5.25", HH 1.6", access, std optical	
Memory	Two 240-pin gold plated DIMM sockets / <i>model 68U:</i> two sockets used (512MB per socket); <i>other models:</i> one socket used / <b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>	Bay ③ 3.5", SL 1", no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / 400MHz / one 15-pin analog connector	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)	
SATA disk	<b>80GB / SATA300</b> 7200 rpm / vibration dampening mounts	Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)	
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot		
Intel IAMT	None		
Security chip	<b>Trusted Platform Module</b> / in Winbond PC8375S chip / TCG 1.2-compliant		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Three variable speed fans (two front and one power supply)		
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>		
Microsoft® Windows® XP Professional with Service Pack 2	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	
<b>Preloaded</b>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
• Rescue and Recovery™	160GB Serial ATA300 Disk (7200 rpm)	09N4254	
• Client Security Solution™	250GB Serial ATA300 Disk (7200 rpm)	41N3015	
• ThinkVantage Productivity Center with Away Manager	Super Multi-Burner DL DVD±RW Drive	41N5581	
• ThinkVantage System Update	USB Portable Diskette Drive	05K9276	
• Symantec® Client Security™	USB Fingerprint Reader	41U3167	
• Diskeeper Lite	USB Gemplus GemPC Smart Card Reader	41N3040	
• PC-Doctor™ (diagnostics)	USB 2.0/Analog Headset by Sennheiser	40Y8518	
• Adobe® Reader	USB 2.0 Lenovo Webcam	40Y8519	
• Google Toolbar	USB 2.0 Memory Key 1GB	40Y7421	
• Google Desktop	USB 2.0 Essential Memory Key 2GB	41U4944	
• Picasa from Google	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	
• Multimedia Center for Think Offerings (combo, DVD models)	USB 2.0 Portable 120GB Hard Disk	41N8379	
• Sonic RecordNow and Drive Letter Access (combo models)	USB 2.0 Super Multi-Burner Drive	41N5565	
• InterVideo WinDVD (combo, DVD)	Lenovo L192p 19" Monitor (black)	6920AB1	
<b>License</b> - CD not included	Lenovo D221 Wide 22" Monitor (black)	6622HB2	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	ThinkVision® L171p 17" Monitor (black)	9417HC2	
	ThinkVision L192p 19" Monitor (black)	9419HC2	
	ThinkVision L201p 20.1" Monitor (black)	9220HB1	
	Lenovo C500 Projector	0039A05	
	Optical 3-button ScrollPoint® Mouse (black)	31P7405	
	Lenovo Laser Mouse (USB, PS/2)	41U3074	
	Kensington® MicroSaver® Desktop Lock	06P3839	
	Enhanced Performance USB Keyboard	73P2620	
	Preferred Pro USB Fingerprint Keyboard	73P4730	
	DVI-I PCIe Connection Adapter (ADD2)	73P2516	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
			<p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>

See footnotes for important warranty information  
US models announced August 1, 2006  
US models withdrawn effective June 2007

# ThinkCentre® M52 Small (8215) - Pentium D - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Virtual Tech	Dual core	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Cover switch	Preload	Vista™ capable	Limited warranty <sup>9</sup>	Workhorse Gbl, Educ	Avail date
M52	8215-G2U	2x3	Pentium® D 820	2.80	2x1MB	800		Dual	512MB	80GB <sup>2</sup>	Combo	GMA	Yes	XP Pro	Yes	3-yr	No	Jun 05
M52	8215-G4U	2x3	Pentium D 820	2.80	2x1MB	800		Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	No	Jun 05
M52	8215-J3U	2x3	Pentium D 920	2.80	2x2MB	800	Yes	Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	No	Jan 06
M52	8215-JDU	2x3	Pentium D 925	3.00	2x2MB	800		Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	No	Sep 06
M52	8215-JEU	2x3	Pentium D 925	3.00	2x2MB	800		Dual	1GB	80GB	Combo	GMA		XP Pro	Yes	3-yr	No	Sep 06
M52	8215-K3U	2x3	Pentium D 930	3.00	2x2MB	800	Yes	Dual	512MB	80GB	DVD	GMA		XP Pro	Yes	3-yr	No	Jan 06
M52	8215-K4U	2x3	Pentium D 930	3.00	2x2MB	800	Yes	Dual	1GB	80GB	Combo	GMA		XP Pro	Yes	3-yr	No	Jan 06

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium D Processor 820 with dual-core</b> , EM64T, Execute Disable Bit, and 800MHz system bus with <b>2x1MB</b> (dual-core) L2 cache or <b>Intel Pentium D Processor 920, 925, or 930 with dual-core</b> , Virtualization Technology (920/930), EM64T, Execute Disable Bit, EIST, and 800MHz system bus with <b>2x2MB</b> (dual-core) L2 cache Processor and L2 cache in FC-LGA4 or LGA6 in LGA775 socket	<b>Small</b> 
Implementation	Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)	
Memory - std/max <sup>8</sup> Memory	<b>512MB or 1GB std / 4GB max / DDR2 only</b> Two 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector	
SATA disk	<b>80GB</b> / SATA300 7200 rpm / vibration dampening mounts	
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard	
Diskette drive	3.5" 1.44MB diskette drive	
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log	
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot	
Modem	None	
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Cooling fans	Three variable speed fans (two front and one power supply)	
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985
<b>Preloaded</b>	250GB Serial ATA300 Disk (7200 rpm)	41N3015
• Rescue and Recovery™	Super Multi-Burner DL DVD±RW Drive	41N5581
• Adobe Reader	USB Portable Diskette Drive	05K9276
• Norton AntiVirus (OEM version)	USB Fingerprint Reader	41U3167
• PC-Doctor™ (diagnostics)	USB 2.0/Analog Headset by Sennheiser	40Y8518
• Client Security Software	USB 2.0 Lenovo Webcam	40Y8519
• Multimedia Center for Think Offerings (DVD, combo models)	USB 2.0 Memory Key 1GB	40Y7421
• RecordNow and DLA (combo models)	USB 2.0 Essential Memory Key 2GB	41U4944
• InterVideo WinDVD (DVD, combo models)	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637
<b>License</b> - CD not included	USB 2.0 Super Multi-Burner Drive	41N5565
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	Lenovo D221 Wide 22" Monitor (black)	6622HB2
	ThinkVision® L171p 17" Monitor (black)	9417CB2
	ThinkVision L192p 19" Monitor (black)	9419CB2
	ThinkVision L201p 20.1" Monitor (black)	9220HB1
	Lenovo M500 Projector	0037A05
	Optical 3-button ScrollPoint® Mouse (black)	31P7405
	Lenovo Laser Mouse (USB, PS/2)	41U3074
	Kensington® MicroSaver® Desktop Lock	06P3839
	Enhanced Performance USB Keyboard	73P2620
	Enh Perf Wireless Keyboard and Mouse	73P4067
	Preferred Pro USB Fingerprint Keyboard	73P4730
	DVI-I PCIe Connection Adapter (ADD2)	73P2516
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
		ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
		<b>LIMITED WARRANTY<sup>9</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) ⇨ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b>

See footnotes for important warranty information  
US models announced on June 28, 2005, January 24, 2006 and September 26, 2006  
US models withdrawn effective June 2007

# ThinkCentre® M52 Small (8215) - Pentium D (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Dual core	Diskette Memory <sup>6</sup>	SATA drive	EIDE disk	EIDE optical	DVI-I Graphics Adptr	Cover Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M52	8215-G9U	2x3	Pentium® D 820	2.80	2x1MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA	945G	No XP Pro	3-yr		Aug 06
M52	8215-GAU	2x3	Pentium D 820	2.80	2x1MB	Dual	512MB Dskte	80GB	Combo	GMA	945G	No XP Pro	3-yr	Educ	Aug 06
M52	8215-GBU	2x3	Pentium D 820	2.80	2x1MB	Dual	512MB Dskte	80GB	DVD±RW <sup>6</sup>	GMA	945G	No XP Pro	3-yr	Educ	Aug 06
M52	8215-95U	2x3	Pentium D 945	3.40	2x2MB	Dual	1GB	250GB	DVD±RW	GMA	ADD2	945G	No XP Pro	3-yr	Aug 06
M52	8215-97U	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB Dskte	160GB	DVD±RW	GMA	945G	No XP Pro	3-yr	Educ	Aug 06
M52	8215-99U	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB Dskte	80GB	DVD	GMA	945G	No XP Pro	3-yr	Aug 06	
M52	8215-9AU	2x3	Pentium D 945	3.40	2x2MB	Dual	1GB Dskte	80GB	Combo	GMA	945G	No XP Pro	3-yr	Aug 06	
M52	8215-9BU	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB Dskte	80GB	Combo	GMA	945G	No XP Pro	3-yr	Aug 06	
M52	8215-9CU	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB Dskte	80GB	Combo	GMA	945G	No XP Pro	3-yr	Aug 06	
Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium D Processor 820 with dual-core</b> , EM64T, Execute Disable Bit, and 800MHz system bus with <b>two x 1MB</b> (dual-core) L2 cache or <b>Intel Pentium D Processor 945 with dual-core</b> , EM64T, Execute Disable Bit, EIST, and 800MHz system bus with <b>two x 2MB</b> (dual-core) L2 cache Implementation Processor and L2 cache in FC-LGA4 or LGA6 in LGA775 socket										<b>Small</b> 				
Memory - std/max <sup>8</sup>	<b>512MB or 1GB std / 4GB max / DDR2 only</b> Memory Two 240-pin gold plated DIMM sockets / <i>model 95U:</i> two sockets used (512MB per socket); <i>other models:</i> one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable										Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports std or opt DVI-I PCIe adptr only)				
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector Graphics adapter <i>Some:</i> [ADD2] DVI-I PCIe Connection Adapter / dual independent display / DVI-i connector										<ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>Toolless cover flips up and tilts backward on rear hinges</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Two slots on riser card (PCI and PCI Express x1)</li> <li>Toolless PCI slots and riser card retention</li> <li>Toolless systemboard retention</li> <li>Steel chassis supports 100 lb (45kg) monitor on top</li> <li>System floor stand for vertical orientation</li> </ul>				
SATA disk	<b>80, 160, or 250GB</b> / SATA300 7200 rpm / vibration dampen mounts SATA controller Serial ATA / 300 MB/sec SATA300 / integrated in ICH7 SATA cables One SATA cable (one 1-drop to disk) / 2 SATA connectors EIDE DVD <i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE EIDE Combo <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo EIDE DVD±RW <i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370) EIDE controller Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) EIDE cables One 2-drop EIDE cable to optical / one connector on systemboard Diskette drive <i>Some:</i> 3.5" 1.44MB diskette drive										<ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>ACPI 2.0c-compliant</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>SMBus 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip)</li> </ul>				
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log										<b>SECURITY</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>				
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)														
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot														
Modem	None														
Security chip	<b>Trusted Platform Module</b> / in Winbond PC8375S chip / TCG 1.2-compliant														
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black														
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black														
Cooling fans	Three variable speed fans (two front and one power supply)														
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs														
<b>Preload with Windows XP Professional<sup>5</sup></b>												Supports ThinkVantage® technologies			
<b>Accessories</b> Microsoft® Windows® XP Professional 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Fingerprint Reader 41U3167 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L192 Wide 19" Monitor (black) 6920AB1 Lenovo D221 Wide 22" Monitor (black) 6622HB1 ThinkVision® L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock 06P3839 Enh Perf Wireless Keyboard and Mouse 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 DVI-I PCIe Connection Adapter (ADD2) 73P2516 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 24x7, 4 hour response (ThinkPlus™ part number 41C9193)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>			

See footnotes for important warranty information  
 US models announced August 1, 2006  
 US models withdrawn effective June 2007

# ThinkCentre® M55e Desktop (9632) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Preload	Workhorse Gbl Educ	Avail date
M55e	9632-A2U	4x3	Celeron 336	2.80	256KB	Single	512MB		80GB <sup>2</sup>	CD	GMA	XP Pro		Sep 06
M55e	9632-B2U	4x3	Celeron 346	3.06	256KB	Single	512MB		80GB	CD	GMA	XP Pro		Sep 06
M55e	9632-22U	4x3	Pentium 4 524	3.06	1MB	Single	512MB		80GB	CD	GMA	XP Pro		Sep 06
M55e	9632-23U	4x3	Pentium 4 524	3.06	1MB	Single	512MB		80GB	Combo	GMA	XP Pro		Sep 06
M55e	9632-31U	4x3	Pentium 4 541	3.20	1MB	Single	512MB	Dsktte	160GB	CD	GMA	XP Pro		Nov 06
M55e	9632-32U	4x3	Pentium 4 541	3.20	1MB	Single	512MB		160GB	Combo	GMA	XP Pro		Nov 06
M55e	9632-D2U	4x3	Pentium D 820	2.80	2x1MB	Dual	512MB		80GB	DVD	GMA	XP Pro		Sep 06
M55e	9632-D5U	4x3	Pentium D 820	2.80	2x1MB	Dual	512MB		160GB	Combo	GMA	XP Pro		Sep 06
M55e	9632-F7U	4x3	Pentium D 925	3.00	2x2MB	Dual	512MB		80GB	DVD	GMA	XP Pro		Sep 06
M55e	9632-F8U	4x3	Pentium D 925	3.00	2x2MB	Dual	512MB		160GB	Combo	GMA	XP Pro		Sep 06
M55e	9632-J4U	4x3	Pentium D 945	3.40	2x2MB	Dual	512MB		160GB	Combo	GMA	XP Pro		Sep 06
M55e	9632-J5U	4x3	Pentium D 945	3.40	2x2MB	Dual	512MB		80GB	DVD	GMA	XP Pro	Global	Nov 06

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Celeron® D Processor 336 or 346</b> with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 256KB L2 cache or</p> <p><b>Intel Pentium® 4 Processor 524 or 541</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 533MHz (524) or 800MHz (541) system bus, and 1MB L2 cache or</p> <p><b>Intel Pentium D Processor 820, 925, or 945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST (9xx only), 800MHz system bus, and 2x1MB (820) or 2x2MB (9xx) L2 cache Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket</p>								<p><b>Desktop</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3" W X 15.94" D X 4.13" H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 3.5", 1" high, access, optional diskette                  Bay ③ 3.5", 1" high, no access, standard disk</p> <p>Slot 1: Low Profile, PCI Express x16 (25w max)                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3 (5v)                  Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p>	
Implementation										
Memory - std/max <sup>5</sup>	<p><b>512MB or 1GB std / 4GB max</b></p> <p>Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</p>									
Memory										
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>									
SATA disk	<p><b>80 or 160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening</p>									
SATA controller	<p>Serial ATA / SATA 3.0Gb/s / integrated in ICH7</p>									
SATA cables	<p>One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar</p>									
EIDE CD	<p><i>Some:</i> 48X-20X<sup>4</sup> CD-ROM</p>									
EIDE Combo	<p><i>Some:</i> 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p>									
EIDE DVD	<p><i>Some:</i> 16X-48X Max<sup>4</sup> DVD-ROM / single-layer</p>									
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p>									
EIDE cables	<p>One 1-drop EIDE cable to optical / 1 planar connector</p>									
Diskette drive	<p><i>31U:</i> 3.5" 1.44MB diskette drive; <i>Others:</i> None</p>									
Media reader	<p>None</p>									
Chipset	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O</p>									
Front ports	<p>Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p>									
Rear ports	<p>Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>									
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>									
Audio	<p>High Definition (HD) Audio / AD1986A codec / SoundMAX® software</p>									
Speaker	<p>One internal speaker for business audio</p>									
Ethernet	<p>Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®</p>									
Modem	<p>None</p>									
Keyboard	<p>104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo</p>									
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo</p>									
Power supply	<p>220 watts with variable speed fan / manual switch / 2 diagnostic LEDs</p>									
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® XP Professional</p> <p>↔ Disk-to-Disk Recovery (in hidden protected area)</p>									
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• ThinkVantage System Update</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Symantec® Client Security™</li> <li>• Multimedia Center for Think Offerings (combo, DVD)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• InterVideo WinDVD (combo, DVD)</li> </ul>									
<b>Accessories</b>	<ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>Super Multi-Burner DL DVD±RW EIDE Drive 41N5581</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L1937 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> </ul> <p>Other accessories at <a href="#">lenovo.com/accessories</a></p>									
									<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>	
									<p>Supports ThinkVantage® technologies</p>	
									<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced September 26, October 17, or November 21, 2006  
 US models withdrawn effective June 2007, August 2007, or June 2008

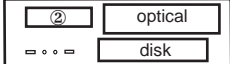


# ThinkCentre® M55e Desktop (9632) - October 2006 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	EIDE optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Education	Gbl	Avail date
<b>M55e</b>	9632-Q1U	4x3	Core 2 Duo E4300	1.80	2MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr			Feb 07
<b>M55e</b>	9632-Q2U	4x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	Combo	GMA	XP Pro	3-yr	Global		Feb 07
<b>M55e</b>	9632-M2U	4x3	Core 2 Duo E6300	1.86	2MB	Dual	1GB	80GB	DVD	GMA	XP Pro	3-yr	WH		Oct 06
<b>M55e</b>	9632-M4U	4x3	Core 2 Duo E6300	1.86	2MB	Dual	1GB	80GB	DVD	GMA	XP Pro	3-yr	Educ		Nov 06
<b>M55e</b>	9632-P1U	4x3	Core 2 Duo E6400	2.13	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr			Oct 06
<b>M55e</b>	9632-P3U	4x3	Core 2 Duo E6400	2.13	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	Educ		Nov 06

Positioning Processor	<b>Mainstream enterprise stability and manageability Intel® Core™ 2 Duo Processor E4300 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300 or E6400 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared)	<b>Desktop</b>	 <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3" W X 15.94" D X 4.13" H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory - std/max <sup>a</sup>	<b>512MB</b> or <b>1GB</b> std / 4GB max		
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, standard optical</li> <li>Bay ② 3.5", 1" high, access, optional diskette</li> <li>Bay ③ 3.5", 1" high, no access, standard disk</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display		<ul style="list-style-type: none"> <li>Slot 1: Low Profile, PCI Express x16 (25w max)</li> <li>Slot 2: Low Profile, PCI Express x1</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</li> </ul>
SATA disk	<b>80</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening		
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®		
Modem	None		
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo		
Power supply	220 watts with variable speed fan / manual switch		
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® XP Professional ◇ Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b>	Supports ThinkVantage® technologies
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Education models: VitalSource Library education software</li> <li>• Education models: Adobe® Photoshop® Elements plus Adobe Premiere® Elements</li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper® Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo, DVD)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> </ul>	<ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>Super Multi-Burner DL DVD±RW EIDE Drive 41N5581</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 4GB 45J7904</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Portable 120GB Hard Disk 41N8379</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L171p 17" LCD Monitor 9417HC2</li> <li>ThinkVision L174 17" LCD Monitor 9227AE1</li> <li>ThinkVision L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Preferred Pro USB Fingerprint Keyboard 73P4730</li> <li>Kensington® Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	<ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced October 17, 2006, November 21, 2006, or January 30, 2007  
 US models withdrawn effective June 2008

# ThinkCentre® M55e Desktop (9632) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Int or ext speaker	Vista preload	Limited warranty <sup>1</sup>	Workhorse Education	Gbl	Availability date
M55e	9632-2KU	4x3	Celeron 420	1.60	512KB	Single	1GB	80GB <sup>2</sup>	DVD	GMA	Ext spks	Business	3-yr			Jun 07
M55e	9632-2NU	4x3	Pentium E2140	1.60	1MB	Dual	1GB	80GB	Combo	GMA	Ext spks	Business	3-yr			Jun 07
M55e	9632-F9U	4x3	Pentium D 925	3.00	2x2MB	Dual	1GB	80GB	DVD	GMA	Internal	Business	3-yr	Global		Feb 07
M55e	9632-QAU	4x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	DVD	GMA	Internal	Business	3-yr			May 07
M55e	9632-Q9U	4x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	Combo	GMA	Internal	Business	3-yr			May 07
M55e	9632-Q8U	4x3	Core 2 Duo E4400	2.00	2MB	Dual	1GB	80GB	Combo	GMA	Internal	Business	3-yr			May 07
M55e	9632-M7U	4x3	Core 2 Duo E6300	1.86	2MB	Dual	1GB	80GB	DVD	GMA	Internal	Business	3-yr	Global		Feb 07

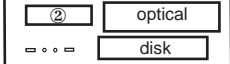
Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Technology, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> or <b>E4400</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared) Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Desktop</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3" W X 15.94" D X 4.13" H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 3.5", 1" high, access, optional diskette                  Bay ③ 3.5", 1" high, no access, standard disk</p> <p>Slot 1: Low Profile, PCI Express x16 (25w max)                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3 (5v)                  Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p>																																		
Implementation																																					
Memory	<p><b>1GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; one socket available</p>																																				
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>																																		
SATA disk	<p><b>80GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening</p>																																				
SATA controller	<p>Serial ATA / SATA 3.0Gb/s / integrated in ICH7</p>																																				
SATA cables	<p>One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar</p>																																				
EIDE DVD	<p><i>Some</i>: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer</p>																																				
EIDE Combo	<p><i>Some</i>: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p>																																				
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p>																																				
EIDE cables	<p>One 1-drop EIDE cable to optical / 1 planar connector</p>																																				
Diskette drive	<p>None</p>																																				
Media reader	<p>None</p>																																				
Chipset	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, USB, LPC bus / ITE Tech® IT8718 Super I/O</p>																																				
Front ports	<p>Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p>																																				
Rear ports	<p>Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>																																				
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>																																				
Audio	<p>High Definition (HD) Audio / AD1986A codec / SoundMAX® software</p>																																				
External speakers	<p><i>Some</i>: [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo</p>																																				
Speaker	<p><i>Some</i>: [Internal] one internal speaker for business audio</p>																																				
Ethernet	<p>Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®</p>																																				
Modem	<p>None</p>																																				
Keyboard	<p><i>Feb models</i>: 104-key Preferred Pro Full-size keyboard (PS/2 connector)  <i>May/Jun models</i>: Preferred Pro USB Keyboard (USB connector), 104-key</p>																																				
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo</p>																																				
Power supply	<p>220 watts with variable speed fan / manual switch</p>																																				
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista Business Edition (32-bit)                  ♦ Vista Basic logo</p>																																				
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Picasa from Google</li> </ul>																																				
<b>Accessories</b>	<table border="0"> <tr> <td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4983</td> </tr> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW EIDE Drive</td> <td>41N5581</td> </tr> <tr> <td>USB Gemplus GemPC Smart Card Reader</td> <td>41N3040</td> </tr> <tr> <td>USB 2.0 Security Memory Key 4GB</td> <td>41U5120</td> </tr> <tr> <td>USB 2.0 Super Multi-Burner Drive</td> <td>41N5565</td> </tr> <tr> <td>ThinkVision® L190x 19" LCD Monitor</td> <td>4439HB2</td> </tr> <tr> <td>ThinkVision L193p 19" LCD Monitor</td> <td>4431HB2</td> </tr> <tr> <td>ThinkVision L197 Wide 19" LCD Monitor</td> <td>4434HE1</td> </tr> <tr> <td>ThinkVision L200p Wide 20.1" LCD Monitor</td> <td>4438HB6</td> </tr> <tr> <td>ThinkVision L220x Wide 22" LCD Monitor</td> <td>4433HB2</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington® Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> </table> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	USB Gemplus GemPC Smart Card Reader	41N3040	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 Super Multi-Burner Drive	41N5565	ThinkVision® L190x 19" LCD Monitor	4439HB2	ThinkVision L193p 19" LCD Monitor	4431HB2	ThinkVision L197 Wide 19" LCD Monitor	4434HE1	ThinkVision L200p Wide 20.1" LCD Monitor	4438HB6	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington® Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	
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			<p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																		

See footnotes for important warranty information  
 US models announced January 30, May 1, or June 5, 2007  
 US models withdrawn effective June 2008

# ThinkCentre® M55e Desktop (9632) - May 2007 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Core	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Int or ext speaker	Pre-load	Limited warranty <sup>1</sup>	Workhorse Education	Gbl	Avail date
<b>M55e</b>	9632-2LU	4x3	Celeron 420	1.60 512KB	Single	1GB	80GB <sup>2</sup>	DVD	GMA	Ext spks	XP Pro	3-yr	No	Jun 07	
<b>M55e</b>	9632-2MU	4x3	Pentium E2140	1.60 1MB	Dual	1GB	80GB	Combo	GMA	Ext spks	XP Pro	3-yr	No	Jun 07	
<b>M55e</b>	9632-Q4U	4x3	Core 2 Duo E4300	1.80 2MB	Dual	512MB	80GB	DVD	GMA	Internal	XP Pro	3-yr	No	May 07	
<b>M55e</b>	9632-Q5U	4x3	Core 2 Duo E4300	1.80 2MB	Dual	1GB	80GB	DVD	GMA	Internal	XP Pro	3-yr	No	May 07	
<b>M55e</b>	9632-Q6U	4x3	Core 2 Duo E4300	1.80 2MB	Dual	1GB	80GB	Combo	GMA	Internal	XP Pro	3-yr	No	May 07	
<b>M55e</b>	9632-Q7U	4x3	Core 2 Duo E4400	2.00 2MB	Dual	1GB	80GB	Combo	GMA	Internal	XP Pro	3-yr	No	May 07	

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Technology, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300 or E4400</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache						<b>Desktop</b>						
Implementation	Processor in FC-LGA6 package in LGA775 socket						<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3" W X 15.94" D X 4.13" H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>						
Memory	<b>512MB or 1GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available						Bay ① 5.25", 1.6" high, access, standard optical Bay ② 3.5", 1" high, access, optional diskette Bay ③ 3.5", 1" high, no access, standard disk						
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display						Slot 1: Low Profile, PCI Express x16 (25w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 (5v) Slot 4: Low Profile, 32-bit PCI 2.3 (5v)						
SATA disk	<b>80GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening								<b>Security</b>				
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7												
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar								<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>				
EIDE DVD	<i>Some</i> : 16X-48X Max <sup>4</sup> DVD-ROM / single-layer												
EIDE Combo	<i>Some</i> : 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo												
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)												
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O												
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)												
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software												
External speakers	<i>Some</i> : [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo												
Speaker	<i>Some</i> : [Internal] one internal speaker for business audio												
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®												
Modem	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo								Supports ThinkVantage® technologies				
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo												
Power supply	220 watts with variable speed fan / manual switch								<b>Limited Warranty<sup>1</sup></b>				
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>												
- Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM						73P4983		<ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>				
↔ Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-5300 CL5 NP DDR2 UDIMM						73P4984						
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-5300 CL5 NP DDR2 UDIMM						73P4985						
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm)						41N3015						
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm)						43R1990						
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW EIDE Drive						41N5581						
• ThinkVantage System Update	USB Portable Diskette Drive						05K9276						
• System Migration Assistant	USB 2.0 Lenovo Multimedia Headset						40Y8518						
• Symantec® Client Security™	USB 2.0 Security Memory Key 4GB						41U5120						
• Diskeeper® Lite	USB 2.0 Portable 80GB Hard Disk						40Y8726						
• PC-Doctor™ (diagnostics)	USB 2.0 Super Multi-Burner Drive						41N5565						
• Adobe® Reader	ThinkVision® L190x 19" LCD Monitor						4439HB2						
• Windows Live™ Toolbar	ThinkVision L193p 19" LCD Monitor						4431HB2						
• Windows Live Search	ThinkVision L197 Wide 19" LCD Monitor						4434HE1						
• Picasa from Google	ThinkVision L200p Wide 20.1" LCD Monitor						4438HB6						
• Multimedia Center for Think Offerings (combo, DVD)	ThinkVision L220x Wide 22" LCD Monitor						4433HB2						
• Sonic RecordNow and Drive Letter Access (combo)	Laser Tilt Wheel Mouse (USB, PS/2)						41U3074						
	Wireless Kbd & Opt Wheel Mouse (via USB)						73P4067						
	Preferred Pro USB Fingerprint Keyboard						73P4730						
	Kensington® Cable Lock from Lenovo						73P2582						
	ADD2 DVI-I PCIe Connection Adapter						73P2516						
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>												
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												

See footnotes for important warranty information  
 US models announced May 1 or June 5, 2007  
 US models withdrawn effective June 2008

# ThinkCentre® M55e Tower (9637) - Single-core - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	EIDE optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Education	Gbl	Avail date
<b>M55e</b>	9637-A1U	4x4	Celeron 336	2.80	256KB	Single	512MB	80GB <sup>2</sup>	CD	GMA	XP Pro	3-yr	None	Sep 06	
<b>M55e</b>	9637-B2U	4x4	Celeron 346	3.06	256KB	Single	512MB	80GB	CD	GMA	XP Pro	3-yr	None	Sep 06	
<b>M55e</b>	9637-22U	4x4	Pentium 4 524	3.06	1MB	Single	512MB	80GB	CD	GMA	XP Pro	3-yr	None	Sep 06	
<b>M55e</b>	9637-23U	4x4	Pentium 4 524	3.06	1MB	Single	512MB	80GB	Combo	GMA	XP Pro	3-yr	None	Sep 06	
<b>M55e</b>	9637-31U	4x4	Pentium 4 541	3.20	1MB	Single	512MB	80GB	CD	GMA	XP Pro	3-yr	None	Sep 06	
<b>M55e</b>	9637-32U	4x4	Pentium 4 541	3.20	1MB	Single	512MB	80GB	Combo	GMA	XP Pro	3-yr	None	Sep 06	

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Celeron® D Processor 336 or 346</b> with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 256KB L2 cache, or <b>Intel Pentium® 4 Processor 524 or 541</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 533MHz (524 only) or 800MHz system bus, and 1MB L2 cache (5xx only)								<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9"W X 16.7" D X 16.14"H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>		
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket								Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
Memory - std/max <sup>a</sup>	<b>512MB std / 4GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>								<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsave® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000) /</b> integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display										
SATA disk	<b>80GB / SATA 3.0Gb/s 7200 rpm / rubber vibration dampening mounts</b> Serial ATA / SATA 3.0Gb/s / integrated in ICH7										
SATA controller	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar										
SATA cables	Some: 48X-20X <sup>4</sup> CD-ROM										
EIDE CD	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo										
EIDE Combo	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)										
EIDE controller	One 1-drop EIDE cable to optical / 1 planar connector										
EIDE cables	None										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel 946GZ Express Chipset /</b> 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O										
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)										
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®										
Modem	None										
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo										
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo										
Power supply	250 watts with variable speed fan / manual switch										
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® XP Professional ♦ Disk-to-Disk Recovery (in hidden protected area)										Supports ThinkVantage® technologies	
<b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>System Migration Assistant</li> <li>PC-Doctor™ (diagnostics)</li> <li>Diskeeper® Lite</li> <li>Symantec® Client Security™</li> <li>Adobe® Reader</li> <li>Google Toolbar</li> <li>Google Desktop</li> <li>Picasa from Google</li> <li>Multimedia Center for Think Offerings (combo)</li> <li>Sonic RecordNow and Drive Letter Access (combo)</li> <li>InterVideo WinDVD (combo)</li> </ul>										<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li><b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9192)</li> <li><b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li><b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li><b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li><b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	
<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Essential Memory Key 4GB 45J7904 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 41N5565 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 ThinkVision® L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L197 Wide 19" LCD Monitor 4434HE1 ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 ADD2 DVI-I PCIe Connection Adapter 73P2516 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											

See footnotes for important warranty information  
 US models announced September 26, 2006  
 US models withdrawn effective June 2007, August 2007, or June 2008

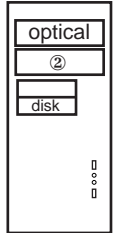
# ThinkCentre® M55e Tower (9637) - Dual-core - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	EIDE optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse (W) Global (G)	Avail date
<b>M55e</b>	9637-D1U	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA 3000	XP Pro	3-yr		Sep 06
<b>M55e</b>	9637-D5U	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB	160GB	Combo	GMA 3000	XP Pro	3-yr		Sep 06
<b>M55e</b>	9637-F9U	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB	80GB	DVD	GMA 3000	XP Pro	3-yr		Oct 06
<b>M55e</b>	9637-FAU	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB	160GB	Combo	GMA 3000	XP Pro	3-yr		Oct 06
<b>M55e</b>	9637-J4U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	160GB	Combo	GMA 3000	XP Pro	3-yr		Sep 06
<b>M55e</b>	9637-J5U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	80GB	DVD	GMA 3000	XP Pro	3-yr	W G	Nov 06

Positioning	<i>Mainstream enterprise stability and manageability</i>	
Processor	<b>Intel® Pentium® D Processor 820, 925, or 945 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST (9xx only), 800MHz system bus, and <b>2x1MB or 2x2MB</b> L2 cache	
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket	
Memory - std/max <sup>a</sup>	<b>512MB</b> std / 4GB max	
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display	
SATA disk	<b>80 or 160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening	
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®	
Modem	None	
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo	
Power supply	230 watts with variable speed fan / manual switch / 2 diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
⚡ Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW EIDE Drive	41N5581
• ThinkVantage System Update	USB Gemplus GemPC Smart Card Reader	41N3040
• System Migration Assistant	USB 2.0 Lenovo Multimedia Headset	40Y8518
• Symantec® Client Security™	USB 2.0 Lenovo Webcam	40Y8519
• Diskeeper® Lite	USB 2.0 Essential Memory Key 4GB	45J7904
• PC-Doctor™ (diagnostics)	USB 2.0 Security Memory Key 4GB	41U5120
• Adobe® Reader	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637
• Google Toolbar	USB 2.0 Portable 120GB Hard Disk	41N8379
• Google Desktop	USB 2.0 Super Multi-Burner Drive	41N5565
• Picasa from Google	ThinkVision® L171p 17" LCD Monitor	9417HC2
• Multimedia Center for Think Offerings (combo, DVD)	ThinkVision L190x 19" LCD Monitor	4439HB2
• Sonic RecordNow and Drive Letter Access (combo)	ThinkVision L193p 19" LCD Monitor	4431HB2
• InterVideo WinDVD (combo, DVD)	ThinkVision L197 Wide 19" LCD Monitor	4434HE1
	ThinkVision L200p Wide 20.1" LCD Monitor	4438HB6
	ThinkVision L220x Wide 22" LCD Monitor	4433HB2
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074
	Kensington® Cable Lock from Lenovo	73P2582
	ADD2 DVI-I PCIe Connection Adapter	73P2516
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
Supports ThinkVantage® technologies		
<b>Limited Warranty<sup>1</sup></b>		
↪ <b>3-year parts and labor</b>		
↪ <b>International Warranty Service<sup>9</sup></b>		
↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>		
↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>		
• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)		
• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)		
• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)		
• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)		
• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)		
↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>		
↪ <b>Post warranty maintenance services available</b>		
↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>		



Bay ① 5.25", 1.6" high, access, standard optical  
 Bay ② 5.25", 1.6" high, access, open  
 Bay ③ 3.5", 1" high, access, optional diskette  
 Bay ④ 3.5", 1" high, no access, standard disk  
 Slot 1: half-length, full-height, PCI Express x16 (75w max)  
 Slot 2: half-length, full-height, PCI Express x1  
 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)

- Security**
- One lock to secure both cover and entire system to fixed object:
    - Padlock loop (in rear for opt padlock)
    - Security slot (in rear for optional Kensington® Microsaver® cable)
  - Power-on password
  - Administrator password
  - Boot sequence control
  - Boot without keyboard, mouse, diskette
  - USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
  - Diskette write protect

See footnotes for important warranty information  
 US models announced September 26, October 17, or November 21, 2006  
 US models withdrawn effective August 2007 or June 2008

# ThinkCentre® M55e Tower (9637) - Dual-core (Oct 2006) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Education	Gbl Avail date
<b>M55e</b>	9637-Q1U	4x4	Core 2 Duo E4300	1.80	2MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr		Feb 07
<b>M55e</b>	9637-Q2U	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	Combo	GMA	XP Pro	3-yr	Global	Feb 07
<b>M55e</b>	9637-P1U	4x4	Core 2 Duo E6300	1.86	2MB	Dual	1GB	80GB	DVD	GMA	XP Pro	3-yr		Oct 06
<b>M55e</b>	9637-P5U	4x4	Core 2 Duo E6300	1.86	2MB	Dual	1GB	80GB	DVD	GMA	XP Pro	3-yr	Educ	Nov 06
<b>M55e</b>	9637-M1U	4x4	Core 2 Duo E6400	2.13	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr		Oct 06
<b>M55e</b>	9637-M2U	4x4	Core 2 Duo E6400	2.13	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	Educ	Oct 06

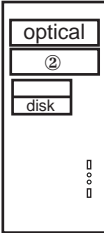
Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Core™ 2 Duo Processor E4300 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300 or E6400</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with <b>2MB</b> L2 cache (shared)	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket		
Memory - std/max <sup>8</sup>	<b>512</b> or <b>1GB</b> std / 4GB max		
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	Bay ① 5.25", 1.6" high, access, standard optical	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display	Bay ② 5.25", 1.6" high, access, open	
SATA disk	<b>80</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening	Bay ③ 3.5", 1" high, access, optional diskette	
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7	Bay ④ 3.5", 1" high, no access, standard disk	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar	Slot 1: half-length, full-height, PCI Express x16 (75w max)	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	Slot 2: half-length, full-height, PCI Express x1	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE	Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®		
Modem	None		
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® XP Professional ◇ Disk-to-Disk Recovery (in hidden protected area)		
<b>Preloaded accessories</b>	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 4GB 45J7904 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L197 Wide 19" LCD Monitor 4434HE1 ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 ADD2 DVI-I PCIe Connection Adapter 73P2516 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	• <i>Education models:</i> VitalSource Library education software • <i>Education models:</i> Adobe® Photoshop® Elements plus Adobe Premiere® Elements • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Symantec® Client Security™ • Diskeeper® Lite • PC-Doctor™ (diagnostics) • Google Desktop • Picasa from Google • Multimedia Center for Think Offerings (combo, DVD) • Sonic RecordNow and Drive Letter Access (combo) • InterVideo WinDVD (combo, DVD)		
<b>CD</b>	• <i>Education models:</i> Adobe Photoshop Elements plus Adobe Premiere Elements		
		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                      - Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>	
		Supports ThinkVantage® technologies	
		<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
 US models announced October 17, 2006, November 21, 2006, or January 30, 2007  
 US models withdrawn effective June 2008

# ThinkCentre® M55e Tower (9637) - Dual-core (May 2007) - withdrawn

Personal Systems Reference (PSREF)

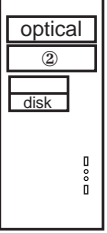
Name	Type-model	Slot x bay	Processor	L2 GHz cache	Core	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Int or ext speaker	Pre-load	Limited warranty <sup>1</sup>	Wrkhrse Education	Gbl Avail date
<b>M55e</b>	9637-3AU	4x4	Celeron 420	1.60 512KB	Single	1GB	80GB <sup>2</sup>	DVD	GMA	Ext spks	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9637-2AU	4x4	Pentium E2140	1.60 1MB	Dual	1GB	80GB	Combo	GMA	Ext spks	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9637-QKU	4x4	Core 2 Duo E4300	1.80 2MB	Dual	512MB	80GB	DVD	GMA	Internal	XP Pro	3-yr	No	May 07
<b>M55e</b>	9637-QHU	4x4	Core 2 Duo E4300	1.80 2MB	Dual	1GB	80GB	DVD	GMA	Internal	XP Pro	3-yr	No	May 07
<b>M55e</b>	9637-QPU	4x4	Core 2 Duo E4300	1.80 2MB	Dual	1GB	80GB	Combo	GMA	Internal	XP Pro	3-yr	No	May 07
<b>M55e</b>	9637-QEU	4x4	Core 2 Duo E4400	2.00 2MB	Dual	1GB	160GB	Combo	GMA	Internal	XP Pro	3-yr	No	May 07

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300 or E4400</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared)                  Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket</p>							<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																																							
Implementation	<p>Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket</p>							<p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, optional diskette                  Bay ④ 3.5", 1" high, no access, standard disk</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>																																																					
Memory	<p><b>512MB or 1GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; one socket available</p>							<p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, optional diskette                  Bay ④ 3.5", 1" high, no access, standard disk</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>																																																					
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>							<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>																																																							
SATA disk	<p><b>80 or 160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening</p>																																																														
SATA controller	<p>Serial ATA / SATA 3.0Gb/s / integrated in ICH7</p>																																																														
SATA cables	<p>One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar</p>																																																														
EIDE DVD	<p><i>Some</i>: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer</p>																																																														
EIDE Combo	<p><i>Some</i>: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p>																																																														
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p>																																																														
EIDE cables	<p>One 1-drop EIDE cable to optical / 1 planar connector</p>																																																														
Diskette drive	<p>None</p>																																																														
Media reader	<p>None</p>																																																														
Chipset	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O</p>																																																														
Front ports	<p>Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p>																																																														
Rear ports	<p>Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>																																																														
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>																																																														
Audio	<p>High Definition (HD) Audio / AD1986A codec / SoundMAX® software</p>																																																														
External speakers	<p><i>Some</i>: [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo</p>																																																														
Speaker	<p><i>Some</i>: [Internal] one internal speaker for business audio</p>																																																														
Ethernet	<p>Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®</p>																																																														
Modem	<p>None</p>																																																														
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>																																																														
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo</p>																																																														
Power supply	<p>280 watts with variable speed fan / manual switch / 2 diagnostic LEDs</p>																																																														
<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Microsoft® Windows® XP Professional</li> <li>◇ Disk-to-Disk Recovery (in hidden protected area)</li> </ul> <p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper® Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo, DVD)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• InterVideo WinDVD (combo, DVD)</li> </ul>							<p><b>Accessories</b></p> <table border="0"> <tr> <td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4983</td> </tr> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW EIDE Drive</td> <td>41N5581</td> </tr> <tr> <td>USB Gemplus GemPC Smart Card Reader</td> <td>41N3040</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 4GB</td> <td>45J7904</td> </tr> <tr> <td>USB 2.0 Security Memory Key 4GB</td> <td>41U5120</td> </tr> <tr> <td>USB 2.0 CD-RW/DVD-ROM Combo II Drive</td> <td>40Y8637</td> </tr> <tr> <td>USB 2.0 Portable 120GB Hard Disk</td> <td>41N8379</td> </tr> <tr> <td>USB 2.0 Super Multi-Burner Drive</td> <td>41N5565</td> </tr> <tr> <td>ThinkVision® L193p 19" LCD Monitor</td> <td>4431HB2</td> </tr> <tr> <td>ThinkVision L197 Wide 19" LCD Monitor</td> <td>4434HE1</td> </tr> <tr> <td>ThinkVision L200p Wide 20.1" LCD Monitor</td> <td>4438HB6</td> </tr> <tr> <td>ThinkVision L220x Wide 22" LCD Monitor</td> <td>4433HB2</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></td> <td></td> </tr> <tr> <td>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></td> <td></td> </tr> </table>							512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	USB Gemplus GemPC Smart Card Reader	41N3040	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 4GB	45J7904	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	USB 2.0 Portable 120GB Hard Disk	41N8379	USB 2.0 Super Multi-Burner Drive	41N5565	ThinkVision® L193p 19" LCD Monitor	4431HB2	ThinkVision L197 Wide 19" LCD Monitor	4434HE1	ThinkVision L200p Wide 20.1" LCD Monitor	4438HB6	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	ADD2 DVI-I PCIe Connection Adapter	73P2516	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		<p>Supports ThinkVantage® technologies</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
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See footnotes for important warranty information  
 US models announced May 1 or June 5, 2007  
 US models withdrawn effective June 2008

# ThinkCentre® M55e Tower (9637) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Workhorse Gbl Educ	Avail date
<b>M55e</b>	9637-3BU	4x4	Celeron 420	1.60	512KB	1GB	80GB <sup>2</sup>	DVD	GMA	Business	Basic	3-yr		Jun 07
<b>M55e</b>	9637-3CU	4x4	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	Business	Basic	3-yr		Jun 07
<b>M55e</b>	9637-FDU	4x4	Pentium D 925	3.00	2x2MB	1GB	80GB	DVD	GMA	Business	Basic	3-yr	Global	Feb 07
<b>M55e</b>	9637-QGU	4x4	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD	GMA	Business	Premium	3-yr		May07
<b>M55e</b>	9637-QJU	4x4	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Business	Premium	3-yr		May07
<b>M55e</b>	9637-QFU	4x4	Core 2 Duo E4400	2.00	2MB	1GB	160GB	Combo	GMA	Business	Premium	3-yr		May07
<b>M55e</b>	9637-P8U	4x4	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA	Business	Basic	3-yr	Global	Feb 07
Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300 or E4400</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared) Processor and L2 cache in FC-LGA6 in LGA775 socket								<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	<b>1GB std / 4GB max<sup>8</sup> /</b> two 240-pin DIMM sockets, non-parity, dual-channel capable; <i>Feb models:</i> <b>PC2-4200 533MHz DDR2</b> , standard memory in 1 socket; 1 socket available; <i>May models:</i> ( <i>italics</i> ) <b>PC2-5300 667MHz DDR2</b> , std memory in both sockets; no sockets available; <i>Jun models:</i> <b>PC2-5300 667MHz DDR2</b> , standard memory in 1 socket; 1 socket available								Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>			
Memory	<b>Intel Graphics Media Accelerator 3000 (GMA 3000) /</b> integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display								<b>Slot 1:</b> half-length, full-height, PCI Express x16 (75w max) <b>Slot 2:</b> half-length, full-height, PCI Express x1 <b>Slot 3:</b> half-length, full-height, 32-bit PCI 2.3 (5v) <b>Slot 4:</b> half-length, full-height, 32-bit PCI 2.3 (5v)					
Graphics	<b>80GB or 160GB /</b> SATA 3.0Gb/s 7200 rpm / rubber vibration dampening mounts Serial ATA / SATA 3.0Gb/s / integrated in ICH7 One SATA cable (one 1-drop to disk) / 2 planar connectors <i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 1-drop EIDE cable to optical / 1 planar connector Diskette drive None Media reader None								<b>Supports ThinkVantage® technologies</b>					
SATA disk	<b>Intel 946GZ Express Chipset /</b> 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)													
SATA controller	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)													
SATA cables	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)													
EIDE DVD	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)													
EIDE Combo	High Definition (HD) Audio / AD1986A codec / SoundMAX® software													
EIDE controller	<i>Jun models:</i> 2-piece speakers, 6 watts (3 watts each), black, Infinity logo													
EIDE cables	<i>Feb/May models:</i> one internal speaker for business audio													
Diskette drive	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®													
Media reader	None													
Chipset	<b>104-key Preferred Pro Full-size keyboard (PS/2 connector)</b> <i>May/June models:</i> Preferred Pro USB Keyboard (USB connector), 104-key													
Keyboard	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo													
Mouse	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs													
Power supply	<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® Vista Business Edition (32-bit)													
	<b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Lenovo Multimedia Center</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> </ul>													
	<ul style="list-style-type: none"> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> </ul>													
	<ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>													

See footnotes for important warranty information  
 US models announced January 30, May 1, or June 5, 2007  
 US models withdrawn effective June 2008



# ThinkCentre® M55e Small (9645) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl Educ	Avail date
<b>M55e</b>	9645-F1U	2x3	Pentium D 915	2.80	2x2MB	512MB	80GB <sup>2</sup>	DVD	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-F3U	2x3	Pentium D 915	2.80	2x2MB	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-G1U	2x3	Pentium D 925	3.00	2x2MB	512MB	80GB	DVD	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-G2U	2x3	Pentium D 925	3.00	2x2MB	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-J1U	2x3	Pentium D 945	3.40	2x2MB	1GB	80GB	DVD	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-J2U	2x3	Pentium D 945	3.40	2x2MB	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-K1U	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA 3000	XP Pro	3-yr	Global	Jan 07
<b>M55e</b>	9645-K2U	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-Q1U	2x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD	GMA 3000	XP Pro	3-yr	Global	Jan 07
<b>M55e</b>	9645-Q2U	2x3	Core 2 Duo E4300	1.80	2MB	512MB	80GB	Combo	GMA 3000	XP Pro	3-yr		Jan 07
<b>M55e</b>	9645-QHU	2x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr		May 07
<b>M55e</b>	9645-QNU	2x3	Core 2 Duo E4300	1.80	2MB	1GB	160GB	Combo	GMA 3000	XP Pro	3-yr		May 07

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® D Processor 915, 925, or 945 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and <b>2x2MB L2 cache</b> or <b>Intel Core™ 2 Duo Processor E4300 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with <b>2MB L2 cache</b> (shared) Processor and L2 cache in FC-LGA6 in LGA775 socket	<b>Small</b>	
Implementation	Processor and L2 cache in FC-LGA6 in LGA775 socket	Bay ① 3.5", slim .5", access, opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk  Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)	
Memory - std/max <sup>a</sup>	<b>512MB</b> or <b>1GB std</b> / 4GB max		
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-5300 667MHz DDR2</b> / non-parity / CAS latency 5 (CL5) / unbuffered / dual-channel capable		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display		
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / dampening mounts		
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7		
SATA combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
SATA DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer		
SATA cables	Two SATA cable (each 1-drop to device) / 2 SATA connectors on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®		
Modem	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® XP Professional ↔ Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>System Migration Assistant</li> <li>Symantec® Client Security™</li> <li>Diskeeper® Lite</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Google Toolbar</li> <li>Google Desktop</li> <li>Picasa from Google</li> <li>Multimedia Center for Think Offerings (combo, DVD)</li> <li>Sonic RecordNow and Drive Letter Access (combo)</li> </ul>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618</li> <li>CD-RW/DVD-ROM Combo SATA 1.5Gb/s 41N5619</li> <li>USB 2.0 Portable 120GB Hard Disk 41N8379</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
			<b>Security</b> <ul style="list-style-type: none"> <li>Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> <li>USB port disablement</li> </ul>
			Supports ThinkVantage® technologies
			<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

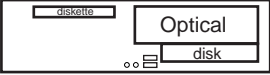
See footnotes for important warranty information  
 US models announced January 16 or May 1, 2007  
 US models withdrawn effective March 2007, January 2008, or June 2008

# ThinkCentre® M55e Small (9645) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Workhorse Gbl Educ	Avail date
M55e	9645-F5U	2x3	Pentium D 915	2.80	2x2MB	1GB	80GB <sup>2</sup>	Combo	GMA 3000	Business	Premium	3-yr		Jan 07
M55e	9645-G5U	2x3	Pentium D 925	3.00	2x2MB	1GB	80GB	Combo	GMA 3000	Business	Premium	3-yr		Jan 07
M55e	9645-J6U	2x3	Pentium D 945	3.40	2x2MB	1GB	160GB	Combo	GMA 3000	Business	Premium	3-yr		Jan 07
M55e	9645-J7U	2x3	Pentium D 945	3.40	2x2MB	1GB	160GB	DVD	GMA 3000	Business	Premium	3-yr	Global	Jan 07
M55e	9645-K7U	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA 3000	Business	Premium	3-yr	Global	Jan 07
M55e	9645-K9U	2x3	Core 2 Duo E6300	1.86	2MB	1GB	160GB	Combo	GMA 3000	Business	Premium	3-yr		Jan 07
M55e	9645-Q4U	2x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA 3000	Business	Premium	3-yr		Jan 07
M55e	9645-Q5U	2x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD	GMA 3000	Business	Premium	3-yr	Global	Jan 07
M55e	9645-QJU	2x3	Core 2 Duo E6400	2.13	2MB	1GB	160GB	Combo	GMA 3000	Business	Basic	3-yr		May 07

• These models have a 3-year limited warranty<sup>1</sup>

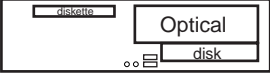
Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® D Processor 915, 925, or 945 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and <b>2x2MB</b> L2 cache or <b>Intel Core™ 2 Duo Processor E4300 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300 or E6400 with dual-core</b> , Intel 64 Technology, Virtualization Technology, EDBit, EIST, and 1066MHz system bus with 2MB L2 cache (shared)	<b>Small</b>	
Implementation	Processor and L2 cache in FC-LGA6 in LGA775 socket	<p>Bay ① 3.5", slim .5", access, opt diskette</p> <p>Bay ② 5.25", HH 1.6", access, std optical</p> <p>Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)</p>	
Memory	<b>1GB std / 4GB max<sup>8</sup></b> / two 240-pin DIMM sockets, non-parity, dual-channel capable; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display		
SATA disk	<b>80 or 160 GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening		
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7		
SATA combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
SATA DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer		
SATA cables	Two SATA cable (each 1-drop to device) / 2 SATA connectors on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX <sup>®</sup> software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN <sup>®</sup>		
Modem	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Picasa from Google</li> </ul>		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618</li> <li>CD-RW/DVD-ROM Combo SATA 1.5Gb/s 41N5619</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision<sup>®</sup> L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage<sup>®</sup> technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
US models announced January 30 or May 1, 2007  
US models withdrawn effective January or June 2008

# ThinkCentre® M55e Small (9645) - June 2007 - withdrawn

Personal Systems Reference (PSREF)

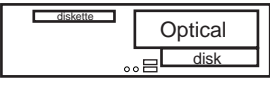
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl Educ	Avail date
<b>M55e</b>	9645-22U	2x3	Celeron 420	1.60	512KB	Single	1GB	80GB <sup>2</sup>	DVD	GMA 3000	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9645-23U	2x3	Pentium E2140	1.60	1MB	Dual	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9645-25U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	DVD	GMA 3000	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9645-26U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	DVD	GMA 3000	XP Pro	3-yr	No	Jun 07
<b>M55e</b>	9645-QMU	2x3	Core 2 Duo E4400	2.00	2MB	Dual	1GB	80GB	Combo	GMA 3000	XP Pro	3-yr	No	Jun 07

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> or <b>E4400</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache		<b>Small</b>	
Implementation	Processor and L2 cache in FC-LGA6 in LGA775 socket		Bay ① 3.5", slim .5", access, opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk  Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)	
Memory	<b>1GB std</b> / 4GB max <sup>8</sup> / <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>	
SATA disk	<b>80GB</b> / SATA 3.0Gb/s 7200 rpm / dampening mounts			
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7			
SATA combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo			
SATA DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer			
SATA cables	Two SATA cable (each 1-drop to device) / 2 SATA connectors on planar			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / <b>SMSC® SHC5407 Super I/O</b> for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)			
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)			
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®			
Modem	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo			
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Microsoft® Windows® XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM		73P4984	
◇ Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 CL5 NP DDR2 UDIMM		73P4985	
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990	
• Rescue and Recovery™	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>		41N5618	
• Client Security Solution™	CD-RW/DVD-ROM Combo SATA 1.5Gb/s		41N5619	
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW SATA Drive		41N5620	
• ThinkVantage System Update	USB Portable Diskette Drive		05K9276	
• System Migration Assistant	USB 2.0 Lenovo Multimedia Headset		40Y8518	
• Symantec® Client Security™	USB 2.0 Essential Memory Key 4GB		45J7904	
• Diskkeeper® Lite	USB 2.0 Security Memory Key 1GB		41U5118	
• PC-Doctor™ (diagnostics)	USB 2.0 Security Memory Key 2GB		41U5119	
• Adobe® Reader	USB 2.0 Security Memory Key 4GB		41U5120	
• Windows Live™ Toolbar	USB 2.0 CD-RW/DVD-ROM Combo II Drive		40Y8637	
• Windows Live Search	USB 2.0 Super Multi-Burner Drive		41N5565	
• Picasa from Google	ThinkVision® L190x 19" LCD Monitor		4439HB2	
• Multimedia Center for Think Offerings (combo, DVD)	ThinkVision L193p 19" LCD Monitor		4431HB2	
• Sonic RecordNow and Drive Letter Access (combo)	ThinkVision L197 Wide 19" LCD Monitor		4434HE1	
• InterVideo WinDVD (combo, DVD)	ThinkVision L200p Wide 20.1" LCD Monitor		4438HB6	
	ThinkVision L220x Wide 22" LCD Monitor		4433HB2	
	Laser Tilt Wheel Mouse (USB, PS/2)		41U3074	
	ADD2 DVI-I PCIe Connection Adapter		73P2516	
	Other accessories at <b>lenovo.com/accessories</b>			
			<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
 US models announced June 5, 2007  
 US models withdrawn effective June 2008

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Workhorse Gbl Educ	Avail date
<b>M55e</b>	9645-QWU	2x3	Celeron 420	1.60	512KB	Single	1GB	80GB <sup>2</sup>	DVD	GMA	Business 32	Basic	3-yr		Jun 07
<b>M55e</b>	9645-24U	2x3	Pentium E2140	1.60	1MB	Dual	1GB	80GB	Combo	GMA	Business 32	Basic	3-yr		Jun 07
<b>M55e</b>	9645-27U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	DVD	GMA	Business 32	Basic	3-yr	K12	Jun 07
<b>M55e</b>	9645-31U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	80GB	DVD	GMA	Business 32	Basic	3-yr	HE	Jun 07
<b>M55e</b>	9645-QKU	2x3	Core 2 Duo E4400	2.00	2MB	Dual	1GB	80GB	DVD	GMA	Business 32	Basic	3-yr		Jun 07
<b>M55e</b>	9645-QLU	2x3	Core 2 Duo E4400	2.00	2MB	Dual	1GB	80GB	Combo	GMA	Business 32	Basic	3-yr		Jun 07

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300 or E4400</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache	<b>Small</b>		
Implementation	Processor and L2 cache in FC-LGA6 in LGA775 socket	Bay ① 3.5", slim .5", access, opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk		
Memory	<b>1GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>		
SATA disk	<b>80GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening mounts			
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7			
SATA DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer			
SATA combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo			
SATA cables	Two SATA cable (each 1-drop to device) / 2 SATA connectors on planar			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / <b>SMSC® SHC5407</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)			
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)			
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar / Broadcom BCM5786 / PCIe x1 / Wake on LAN®			
Modem	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo			
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>• Microsoft® Windows® Vista Business Edition (32-bit)</li> </ul>			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some (K12):</i> K-12 education software                             <ul style="list-style-type: none"> <li>- VitalSource Library School Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Digital School Collection                                     <ul style="list-style-type: none"> <li>- Photoshop Elements 5 (and CD)</li> <li>- Premier Elements 3 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> </ul> </li> <li>• <i>Some (HE):</i> Higher education software                             <ul style="list-style-type: none"> <li>- VitalSource Library College Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Photoshop Elements 5 (and CD)</li> <li>- Adobe Premier Elements 3 (and DVD)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Lenovo Multimedia Center</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> </ul>		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced June 5, 2007  
 US models withdrawn effective June 2008

**Partial list of accessories supported on ThinkCentre M55e, M55, and M55p**

**Memory**

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	ann 06/28/05
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	ann 06/28/05
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	ann 09/26/06

Only supported with Q965 with M55 Desktop 8810, M55 Tower 8811, M55p Small 8808, and M55p Tower 8811:

512MB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2976	ann 09/26/06
1GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2977	ann 09/26/06
2GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2978	ann 01/08/08

<sup>48</sup> When PC2-6400 is installed with systems that have PC2-5300 memory, PC2-6400 will operate at the PC2-5300 memory speed.

**Optical**

M55 Ultra Small 8807 uses Ultrabay™ Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] EIDE optical drives:

CD-RW/DVD Combo Ultrabay Enhanced (cur) <sup>47</sup>	73P3275	ann 10/07/03
ThinkPad DVD Ultrabay Slim Burner (flat) <sup>47</sup>	41N5643	ann 05/31/07

<sup>47</sup> Not supported by Lenovo

M55e Small 9645, M55 Small 8808/9168, M55p Small 8808, M55 Desktop 8810/9166, M55 Tower 8811/9167, and M55p Tower 8811 support Serial ATA optical drives:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
CD-RW/DVD-ROM Combo SATA 1.5Gb/s	41N5619	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

M55e Desktop 9632 and M55e Tower 9637 support EIDE optical drives:

16X Max <sup>4</sup> DVD-ROM (black)	22P6950	
Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	ann 05/30/06

**Storage and removable storage**

80GB SATA 3.0Gb/s Disk (7200 rpm)	09N4253	ann 05/19/03
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	ann 05/19/03
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07

USB Portable Diskette Drive	05K9276	ann 06/05/00
USB 2.0 Essential Memory Key 1GB	41U4940	ann 01/23/07
USB 2.0 Essential Memory Key 2GB	41U4944	ann 01/23/07
USB 2.0 Essential Memory Key 4GB	45J7904	ann 06/24/08
USB 2.0 Security Memory Key 1GB	41U5118	ann 07/17/07
USB 2.0 Security Memory Key 2GB	41U5119	ann 07/17/07
USB 2.0 Security Memory Key 4GB	41U5120	ann 07/17/07
USB 2.0 Portable 80GB Hard Disk	41N8378	ann 04/17/07
USB 2.0 Portable 120GB Hard Disk	41N8379	ann 04/17/07
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	ann 01/05/06
USB 2.0 Super Multi-Burner Drive	41N5565	ann 01/23/07

**Graphics**

M55e Small 9645 supports:

ADD2 DVI-I PCIe Connection Adapter <sup>40</sup>	73P2516	ann 06/28/05
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<sup>40</sup> No dual independent display with Intel 946GZ

M55 Small 8808/9168 and M55p Small 8808 support:

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
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M55e Desktop 9632 supports Low Profile 25 watts max:

ADD2 DVI-I PCIe Connection Adapter <sup>40</sup>	73P2516	ann 06/28/05
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<sup>40</sup> No dual independent display with Intel 946GZ

M55 Desktop 8810/9166 support Low Profile 25 watts max:

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
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M55e Tower 9637 supports 75 watts max:

ADD2 DVI-I PCIe Connection Adapter <sup>40</sup>	73P2516	ann 06/28/05
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<sup>40</sup> No dual independent display with Intel 946GZ

M55 Tower 8811/9167 and M55p Tower 8811 support 75 watts max:

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
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**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	ann 12/07/04
Preferred Pro USB Fingerprint Keyboard	73P4730	ann 02/22/05

**Mouse**

Optical Wheel Mouse (USB)	06P4069	ann 05/21/03
Optical ScrollPoint® Mouse (USB, PS/2)	31P7405	ann 08/27/02
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	ann 01/23/07

**Multimedia**

USB 2.0 Lenovo Multimedia Headset	40Y8518	ann 06/27/06
USB 2.0 Lenovo Webcam	40Y8519	ann 08/29/06

**Security**

Kensington® Cable Lock from Lenovo	73P2582	ann 12/29/03
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

**Mounting Device**

M55 Ultra Small 8807 supports under desk mounting device: ThinkCentre Ultra Small Under Desk Mount	40Y8625	ann 09/06/05
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**Monitors**

Lenovo E75 17" CRT Monitor (16.0" vis) blk	6307BTN	ann 01/16/07
ThinkVision® L151 15" LCD Monitor	9165AC6	ann 10/23/07
ThinkVision L171p 17" LCD Monitor	9417HC2	ann 10/31/06
ThinkVision L174 17" LCD Monitor	9227AE1	ann 04/15/08
ThinkVision L190x 19" LCD Monitor	4439HB2	ann 10/23/07
ThinkVision L193p 19" LCD Monitor	4431HB2	ann 10/23/07
ThinkVision L197 Wide 19" LCD Monitor	4434HE1	ann 04/15/08
ThinkVision L200p Wide 20.1" LCD Monitor	4438HB6	ann 04/15/08
ThinkVision L220x Wide 22" LCD Monitor	4433HB2	ann 10/23/07

**Monitor Accessories<sup>46</sup>**

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
Kensington Cable Lock from Lenovo	73P2582	ann 12/29/03
Radial Arm	19K4464	ann 05/05/00

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

**Medialess License Key (MLK)**

Microsoft® Office 2007 Basic, English	43R1528	ann 01/31/07
Microsoft Office 2007 Small Business, Engl	43R1534	ann 01/31/07
Microsoft Office 2007 Professional, English	43R1531	ann 01/31/07

Other accessories at [lenovo.com/accessories](http://lenovo.com/accessories)

Accessories Guide pdf at [lenovo.com/accessoriesguide](http://lenovo.com/accessoriesguide)

Need to buy accessories no longer marketed by Lenovo? See [www.itxchange.com/lenovo](http://www.itxchange.com/lenovo) for the Options Continuation Program.

**ThinkPlus™.7 service upgrade options<sup>7</sup> for 3-year warranty models:**

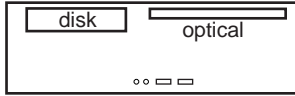
3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9192
3-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9193
4-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9194
4-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9195
4-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9196

Post-warranty annual maintenance agreements at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)

# ThinkCentre® M55 Ultra Small (8807) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M55	8807-E3U	1x2	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	Combo	GMA	Q963	Yes	No	XP Pro	3-yr	Gbl	Jun 07
M55	8807-52U	1x2	Pentium D 925	3.00	2x2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8807-65U	1x2	Pentium D 945	3.40	2x2MB	512MB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr	WH	Sep 06
M55	8807-66U	1x2	Pentium D 945	3.40	2x2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8807-DRU	1x2	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr		May 07
M55	8807-DPU	1x2	Core 2 Duo E4300	1.80	2MB	1GB	160GB	DVD±RW	GMA	Q963	Yes	No	XP Pro	3-yr		May 07
M55	8807-93U	1x2	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8807-97U	1x2	Core 2 Duo E6300	1.86	2MB	1GB	160GB	DVD±RW	GMA	Q963	Yes	No	XP Pro	3-yr		Sep 06
M55	8807-D2U	1x2	Core 2 Duo E6400	2.13	2MB	512MB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr		Sep 06
M55	8807-D5U	1x2	Core 2 Duo E6400	2.13	2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	XP Pro	3-yr		Sep 06

Positioning Processor	<p><i>Stability and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> or <b>945</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> or <b>E6400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB shared L2 cache</p> <p>Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Ultra Small</b></p>  <p>Bay ① 3.5", SL 1", no access, std disk (desktop)                  Bay ② 5.25", *slim .5", access, std optical (notebook)</p> <p>* Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 10.8" D X 3.4" H</li> <li>• 275mm W X 275mm D X 87.5mm H</li> <li>• 13.2 to 14.0 lb (6.0 to 6.4 kg)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>
Memory	<p><b>512MB</b> or <b>1GB std</b> / 4GB max<sup>8</sup> / <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q963 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector</p>		
SATA disk	<p><b>80</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening mounts</p>		<p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>8</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	<p>Serial ATA / 300 MB/sec SATA300 / integrated in ICH8</p>		
SATA cables	<p>One SATA cable (1-drop to disk) / one SATA connector on planar</p>		
EIDE Combo	<p><i>Some:</i> 24X/24X/24X/8X Max<sup>11</sup> CD-RW/DVD-ROM Combo Drive / Ultrabay Enhanced (12.7mm high)</p>		
EIDE DVD±RW	<p><i>Some:</i> Multi-Burner DL DVD±RW Drive / Ultrabay Enhanced (12.7mm high)</p>		
EIDE controller	<p>Enhanced IDE / ATA-100 / via EIDE bridge SIL3811 from ICH8</p>		
EIDE cables	<p>One cable (one 1-drop Ultrabay Enhanced cable to optical) / one EIDE connector (Ultrabay Enhanced) on systemboard</p>		
Diskette drive	<p>None</p>		
Chipset	<p><b>Intel Q963 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio / AD1983HD codec / SoundMAX® software</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar / Broadcom® BCM5755 (PHY/MAC) / PCIe x1</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p><b>Trusted Platform Module</b> / in Broadcom® BCM5755 / TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>		
Power supply	<p>225 watts with variable speed fan / autosensing / two diagnostic LEDs</p>		
<p><b>Preload with Windows XP Professional<sup>5</sup> Accessories</b></p>			
Microsoft® Windows® XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
- Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
	250GB Serial ATA300 Disk (7200 rpm)	41N3015	
	500GB Serial ATA300 Disk (7200 rpm)	43R1990	
<b>Preloaded (only some listed)</b>	USB Portable Diskette Drive	05K9276	
• Rescue and Recovery™	USB 2.0 Security Memory Key 2GB	41U5119	
• Client Security Solution™	USB 2.0 Security Memory Key 4GB	41U5120	
• ThinkVantage System Update	USB 2.0 Super Multi-Burner Drive	41N5565	
• System Migration Assistant	ThinkVision® L193p 19" LCD Monitor	4431HB2	
• Symantec® Client Security™	ThinkVision L194 Wide 19" LCD Monitor	4434HB6	
• PC-Doctor™ (diagnostics)	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	
• Multimedia Center for Think Offerings (combo, DVD±RW)	ThinkCentre Ultra Small Under Desk Mount	40Y8625	
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	Kensington® Cable Lock from Lenovo	73P2582	
• InterVideo WinDVD (combo, DVD±RW)	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced September 26 or October 24, 2006, or May 1 or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Ultra Small (8807) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Chipset	Security chip	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M55</b>	8807-E2U	1x2	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	Q963	Yes	No	Business Basic	3-yr		Jun 07
<b>M55</b>	8807-DQU	1x2	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	Business Premium	3-yr		May 07
<b>M55</b>	8807-DNU	1x2	Core 2 Duo E4300	1.80	2MB	1GB	160GB	DVD±RW	GMA	Q963	Yes	No	Business Premium	3-yr		May 07
<b>M55</b>	8807-9JU	1x2	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA	Q963	Yes	No	Business Premium	3-yr	Gbl	Feb 07

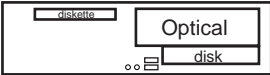
Positioning Processor	<p><i>Stability and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared) Processor in FC-LGA6 package in LGA775 socket</p>		Ultra Small	
Implementation	Processor in FC-LGA6 package in LGA775 socket		<p>Bay ① 3.5", SL 1", no access, std disk (desktop)</p> <p>Bay ② 5.25", *slim .5", access, std optical (notebook)</p> <p>* Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)</p>	
Memory	<p><b>1GB std</b> / 4GB max<sup>8</sup> / <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in both sockets; no sockets available;</p> <p><i>Non-italics:</i> standard memory in one socket; one socket available</p>		<p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 10.8" D X 3.4" H</li> <li>• 275mm W X 275mm D X 87.5mm H</li> <li>• 13.2 to 14.0 lb (6.0 to 6.4 kg)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q963 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector</p>			
SATA disk	<p><b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening mounts</p>			
SATA controller	<p>Serial ATA / 300 MB/sec SATA300 / integrated in ICH8</p>			
SATA cables	<p>One SATA cable (1-drop to disk) / one SATA connector on planar</p>			
EIDE Combo	<p><i>Some:</i> 24X/24X/24X/8X Max<sup>11</sup> CD-RW/DVD-ROM Combo Drive / Ultrabay Enhanced (12.7mm high)</p>			
EIDE DVD±RW	<p><i>Some:</i> Multi-Burner DL DVD±RW Drive / Ultrabay Enhanced (12.7mm high)</p>			
EIDE controller	<p>Enhanced IDE / ATA-100 / via EIDE bridge SIL3811 from ICH8</p>			
EIDE cables	<p>One cable (one 1-drop Ultrabay Enhanced cable to optical) / one EIDE connector (Ultrabay Enhanced) on systemboard</p>			
Diskette drive	None			
Chipset	<p><b>Intel Q963 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMC<sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)			
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX <sup>®</sup> software			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar / Broadcom <sup>®</sup> BCM5755 (PHY/MAC) / PCIe x1			
Intel AMT	None			
Modem	None			
Security chip	<b>Trusted Platform Module</b> / in Broadcom <sup>®</sup> BCM5755 / TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	225 watts with variable speed fan / autosensing / two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista Business Edition (32-bit)</p>			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>500GB Serial ATA300 Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Security Memory Key 1GB 41U5118</li> <li>USB 2.0 Security Memory Key 2GB 41U5119</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L194 Wide 19" LCD Monitor 4434HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>Kensington® Cable Lock from Lenovo 73P2582</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Preferred Pro USB Fingerprint Keyboard 73P4730</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>	
			Supports ThinkVantage® technologies	
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Small (8808) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M55	8808-KWU	2x3	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	DVD	GMA	Q963	None	No	XP Pro	3-yr	Gbl	Sep 07
M55	8808-KGU	2x3	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	Q963	None	No	XP Pro	3-yr		Jun 07
M55	8808-H3U	2x3	Pentium D 925	3.00	2x2MB	1GB	80GB	DVD	GMA	Q963	None	No	XP Pro	3-yr	Gbl	Oct 06
M55	8808-8HU	2x3	Pentium D 945	3.40	2x2MB	1GB	80GB	DVD	GMA	Q963	None	No	XP Pro	3-yr	Gbl	Sep 06
M55	8808-8NU	2x3	Pentium D 945	3.40	2x2MB	1GB	80GB	Combo	GMA	Q963	None	No	XP Pro	3-yr		Sep 06
M55	8808-F9U	2x3	Core 2 Duo E4300	1.80	2MB	512MB	80GB	DVD	GMA	Q963	None	No	XP Pro	3-yr		May 07
M55	8808-FAU	2x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Q963	None	No	XP Pro	3-yr		May 07
M55	8808-94U	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA	Q963	None	No	XP Pro	3-yr	Gbl	Sep 06
M55	8808-9DU	2x3	Core 2 Duo E6300	1.86	2MB	1GB	160GB	DVD±RW	GMA	Q963	None	No	XP Pro	3-yr		Sep 06
M55	8808-D2U	2x3	Core 2 Duo E6400	2.13	2MB	1GB	80GB	Combo	GMA	Q963	None	No	XP Pro	3-yr		Sep 06

Positioning Processor	<p><i>Stability and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> or <b>945</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> or <b>E6400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB shared L2 cache</p> <p>Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Small</b></p>  <p>Bay ① 3.5", slim .5", access, opt diskette                  Bay ② 5.25", HH 1.6", access, std optical                  Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)                  Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptry only)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>																																																		
Implementation	Processor in FC-LGA6 package in LGA775 socket		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																		
Memory	<p><b>512MB</b> or <b>1GB std</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>																																																				
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b>, integrated graphics in Q963, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports dual independent display with optional ADD2 adapter</p>																																																				
SATA disk	<p><b>80</b> or <b>160GB</b>, SATA300 7200 rpm, vibration dampening mounts</p>																																																				
SATA controller	Serial ATA, 300 MB/sec SATA300, integrated in ICH8																																																				
SATA DVD	<i>Some</i> : DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)																																																				
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)																																																				
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)																																																				
SATA cables	Two SATA cables (each 1-drop to device), 2 SATA connectors																																																				
EIDE controller	None																																																				
Diskette drive	None																																																				
Chipset	<p><b>Intel Q963 Express Chipset</b>, 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>																																																				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																				
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)																																																				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)																																																				
Audio	High Definition (HD) Audio, AD1983HD codec, SoundMAX® software																																																				
Speaker	One internal speaker for business audio																																																				
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5787 (PHY/MAC), PCIe x1																																																				
Intel AMT	None																																																				
Modem	None																																																				
Security chip	None																																																				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo																																																				
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																																																				
Power supply	225 watts with variable speed fan, manual switch, 2 diagnostic LEDs																																																				
<b>Preload with Windows XP Professional<sup>5</sup></b>	<p><b>Accessories</b></p> <table border="1"> <tr> <td>Microsoft® Windows® XP Professional</td> <td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4983</td> </tr> <tr> <td>- Disk-to-Disk Recovery (in hidden protected area)</td> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td></td> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td></td> <td>500GB Serial ATA300 Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td></td> <td>USB 2.0 Security Memory Key 4GB</td> <td>41U5120</td> </tr> <tr> <td></td> <td>USB 2.0 Super Multi-Burner Drive</td> <td>41N5565</td> </tr> <tr> <td></td> <td>CD-RW/DVD-ROM Combo SATA150 Drive</td> <td>41N5619</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>ThinkVision® L194 Wide 19" LCD Monitor</td> <td>4434HB6</td> </tr> <tr> <td></td> <td>ThinkVision L220x Wide 22" LCD Monitor</td> <td>4433HB2</td> </tr> <tr> <td></td> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td></td> <td>Kensington® Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td></td> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td></td> <td>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></td> <td></td> </tr> <tr> <td></td> <td>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></td> <td></td> </tr> </table>		Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984		2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985		500GB Serial ATA300 Disk (7200 rpm)	43R1990		USB Portable Diskette Drive	05K9276		USB 2.0 Lenovo Webcam	40Y8519		USB 2.0 Security Memory Key 4GB	41U5120		USB 2.0 Super Multi-Burner Drive	41N5565		CD-RW/DVD-ROM Combo SATA150 Drive	41N5619		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		ThinkVision® L194 Wide 19" LCD Monitor	4434HB6		ThinkVision L220x Wide 22" LCD Monitor	4433HB2		Laser Tilt Wheel Mouse (USB, PS/2)	41U3074		Kensington® Cable Lock from Lenovo	73P2582		ADD2 DVI-I PCIe Connection Adapter	73P2516		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
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See footnotes for important warranty information  
 US models announced Sep 26 or Oct 24, 2006, or May 1, Jun 5, or Sep 4, 2007  
 US models withdrawn effective May 2008




# ThinkCentre® M55 Small (8808) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model bay	Slot x Processor	L2 cache	GHz	Memory <sup>o</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M55</b>	8808-KFU	2x3 Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	Q963	None	No	Business	Basic	3-yr		Jun 07
<b>M55</b>	8808-FBU	2x3 Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Q963	None	No	Business	Premium	3-yr		May 07
<b>M55</b>	8808-FCU	2x3 Core 2 Duo E4300	1.80	2MB	1GB	160GB	DVD±RW	GMA	Q963	None	No	Business	Premium	3-yr		May 07
<b>M55</b>	8808-EJU	2x3 Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA	Q963	None	No	Business	Premium	3-yr	Gbl	Feb 07


Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Pentium® Dual-Core Processor E2140</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared) or <b>Intel Core 2 Duo Processor E6300</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared) Processor in FC-LGA6 package in LGA775 socket	<b>Small</b>	
Implementation		<p>Bay ① 3.5", slim .5", access, opt diskette</p> <p>Bay ② 5.25", HH 1.6", access, std optical</p> <p>Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)</p>	
Memory	<b>1GB std / 4GB max<sup>o</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q963 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter		
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8		
SATA DVD	DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA cables	Two SATA cables (each 1-drop to device) / 2 SATA connectors		
EIDE controller	None		
Diskette drive	None		
Chipset	<b>Intel Q963 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>o</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX <sup>o</sup> software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom <sup>o</sup> BCM5787 (PHY/MAC) / PCIe x1		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) <ul style="list-style-type: none"> <li>- optional cable also locks the cover by deactivating the cover release buttons</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>
			Supports ThinkVantage <sup>o</sup> technologies
<b>Preloaded operating system<sup>2o</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b>
- Microsoft <sup>o</sup> Windows <sup>o</sup> Vista Business Edition (32-bit)	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983		↔ <b>3-year parts and labor</b>
	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984		↔ <b>International Warranty Service<sup>o</sup></b>
	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985		↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>
<b>Preloaded applications<sup>5</sup></b>	250GB Serial ATA300 Disk (7200 rpm) 41N3015		↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>
• Rescue and Recovery <sup>TM</sup>	500GB Serial ATA300 Disk (7200 rpm) 43R1990		• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus <sup>TM</sup> part number 41C9192)
• Client Security Solution <sup>TM</sup>	USB Portable Diskette Drive 05K9276		• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)
• ThinkVantage Productivity Center	USB 2.0 Lenovo Multimedia Headset 40Y8518		• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)
• ThinkVantage System Update	USB 2.0 Lenovo Webcam 40Y8519		• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)
• System Migration Assistant	USB 2.0 Security Memory Key 4GB 41U5120		• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)
• Norton Internet Security <sup>TM</sup> (90 days of virus definitions)	USB 2.0 Super Multi-Burner Drive 41N5565		↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b>
• Diskeeper <sup>o</sup> Home	DVD-ROM DL SATA150 16X-48X Max <sup>4</sup> Drive 41N5618		↔ <b>Post warranty maintenance services available</b>
• PC-Doctor <sup>TM</sup> (diagnostics)	CD-RW/DVD-ROM Combo SATA150 Drive 41N5619		↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
• Adobe <sup>o</sup> Reader	Super Multi-Burner DL DVD±RW SATA Drive 41N5620		
• Windows Live <sup>TM</sup> Toolbar	ThinkVision <sup>o</sup> L171p 17" LCD Monitor 9417HC2		
• Windows Live Search	ThinkVision L190x 19" LCD Monitor 4439HB2		
• Picasa from Google	ThinkVision L193p 19" LCD Monitor 4431HB2		
	ThinkVision L194 Wide 19" LCD Monitor 4434HB6		
	ThinkVision L220x Wide 22" LCD Monitor 4433HB2		
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067		
	Preferred Pro USB Fingerprint Keyboard 73P4730		
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074		
	Kensington <sup>o</sup> Cable Lock from Lenovo 73P2582		
	ADD2 DVI-I PCIe Connection Adapter 73P2516		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Small (9168) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Memory <sup>9</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	ENERGY STAR 4.0	Intel AMT	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M55	9168-A1U	2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB <sup>2</sup>	Combo	GMA	Q963	No	ES40	No	Business32	3-yr	No	Sep07
M55	9168-A2U	2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB	DVD	GMA	Q963	No	ES40	No	XP Pro	3-yr	No	Sep07

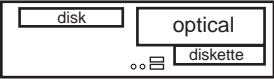
Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB L2 cache (shared)										<b>Small</b>					
Implementation	Processor in FC-LGA6 package in LGA775 socket										Bay ① 3.5", slim .5", access, opt diskette		Bay ② 5.25", HH 1.6", access, std optical			
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Bay ③ 3.5", SL 1", no access, std disk		Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)			
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> , integrated graphics in Q963, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports dual independent display with optional ADD2 adapter										Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>			
SATA disk	<b>80GB</b> , SATA300 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>		Supports ThinkVantage® technologies		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, 300 MB/sec SATA300, integrated in ICH8															
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)															
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)															
SATA cables	Two SATA cables (each 1-drop to device), 2 SATA connectors															
EIDE controller	None															
Diskette drive	None															
Chipset	<b>Intel Q963 Express Chipset</b> , 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SHC5407</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, AD1983HD codec, SoundMAX® software															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5787 (PHY/MAC), PCIe x1															
Intel AMT	None															
Modem	None															
Security chip	None															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	275W, variable speed fan, autosensing, 80 PLUS®, ENERGY STAR 4.0-compliant															
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>															
- <i>Some:</i> Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983															
- <i>Some:</i> Microsoft Windows Vista® Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984															
↔ <i>Vista model:</i> Vista Basic logo	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985															
<b>Preloaded applications<sup>9</sup> (all OSes)</b>	160GB Serial ATA300 Disk (7200 rpm) 09N4254															
• Rescue and Recovery™	250GB Serial ATA300 Disk (7200 rpm) 41N3015															
• Client Security Solution™	500GB Serial ATA300 Disk (7200 rpm) 43R1990															
• ThinkVantage Productivity Center	USB Portable Diskette Drive 05K9276															
• ThinkVantage System Update	USB 2.0 Lenovo Multimedia Headset 40Y8518															
• System Migration Assistant	USB 2.0 Lenovo Webcam 40Y8519															
• Symantec® Client Security™ (XP)	USB 2.0 Essential Memory Key 1GB 41U4940															
• Norton Internet Security™ (90 days of virus definitions) (Vista)	USB 2.0 Essential Memory Key 2GB 41U4944															
• Diskeeper® Lite (XP)	USB 2.0 Security Memory Key 1GB 41U5118															
• Diskeeper Home (Vista)	USB 2.0 Security Memory Key 2GB 41U5119															
• PC-Doctor™ (diagnostics)	USB 2.0 Security Memory Key 4GB 41U5120															
• Adobe® Reader	USB 2.0 Super Multi-Burner Drive 41N5565															
• Windows Live™ Toolbar	DVD-ROM DL SATA150 16X-48X Max <sup>4</sup> Drive 41N5618															
• Windows Live Search	CD-RW/DVD-ROM Combo SATA150 Drive 41N5619															
• Picasa from Google	Super Multi-Burner DL DVD±RW SATA Drive 41N5620															
• Microsoft Office 2007 Trial	ThinkVision® L171p 17" LCD Monitor 9417HC2															
• Multimedia Center for Think Offerings (XP)	ThinkVision L190x 19" LCD Monitor 4439HB2															
• Sonic RecordNow and Drive Letter Access (combo)	ThinkVision L193p 19" LCD Monitor 4431HB2															
• InterVideo WinDVD (combo, DVD)	ThinkVision L194 Wide 19" LCD Monitor 4434HB6															
	ThinkVision L220x Wide 22" LCD Monitor 4433HB2															
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067															
	Preferred Pro USB Fingerprint Keyboard 73P4730															
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074															
	Kensington® MicroSaver® Desktop Lock 06P3839															
	ADD2 DVI-I PCIe Connection Adapter 73P2516															
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>															
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>															

See footnotes for important warranty information  
US models announced July 17, 2007  
US models withdrawn effective May 2008

# ThinkCentre® M55 Desktop (8810) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M55	8810-H2U	3x3	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Jun 07
M55	8810-F4U	3x3	Pentium D 925	3.00	2x2MB	512MB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Oct 06
M55	8810-FBU	3x3	Pentium D 925	3.00	2x2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Oct 06
M55	8810-6EU	3x3	Pentium D 945	3.40	2x2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8810-6FU	3x3	Pentium D 945	3.40	2x2MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-ESU	3x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr		May 07
M55	8810-EPU	3x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		May 07
M55	8810-93U	3x3	Core 2 Duo E6300	1.86	2MB	512MB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-94U	3x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8810-9AU	3x3	Core 2 Duo E6300	1.86	2MB	1GB	160GB	DVD±RW	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-D1U	3x3	Core 2 Duo E6400	2.13	2MB	512MB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-D2U	3x3	Core 2 Duo E6400	2.13	2MB	512MB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-D3U	3x3	Core 2 Duo E6400	2.13	2MB	1GB	160GB	DVD±RW	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8810-D7U	3x3	Core 2 Duo E6400	2.13	2MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Oct 06

Positioning Processor	<b>Stability and manageability for the enterprise</b> <b>Intel® Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> or <b>945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> or <b>E6400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 2MB shared L2 cache		<b>Desktop</b>
Implementation	Processor in FC-LGA6 package in LGA775 socket		 <p>Bay ① 5.25", HH 1.6", access, std optical                  Bay ② 3.5", SL 1", access, opt diskette                  Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (25w max), supports optional ADD2 card                  Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.8" W X 15.2" D X 4.2" H</li> <li>• 350mm W X 385mm D X 108mm H</li> <li>• With vertical stand: 5.9" W X 15.2" D X 15.0" H</li> <li>• 18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>• All three bays flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI 2.3)</li> <li>• Toolless systemboard and adapter retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>
Memory	<b>512MB or 1GB std</b> / 8GB max <sup>8</sup> / <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter		
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8		
SATA DVD	Some: DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	Some: CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)		
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device) / 3 SATA connectors		
EIDE controller	None		
Diskette drive	None		
Chipset	<b>Intel Q965 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SHC5407</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5755 (PHY/MAC) / PCIe x1		
Intel AMT	None		
Security chip	<b>Trusted Platform Module</b> / in Broadcom® BCM5755 / TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup> Accessories</b>			
Microsoft® Windows® XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
- Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
<b>Preloaded</b> (only some listed)	250GB Serial ATA300 Disk (7200 rpm)	41N3015	
• Rescue and Recovery™	500GB Serial ATA300 Disk (7200 rpm)	43R1990	
• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)	USB 2.0 Lenovo Webcam	40Y8519	
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	USB 2.0 Security Memory Key 4GB	41U5120	
• InterVideo WinDVD (combo, DVD, DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• InterVideo WinDVD Creator (DVD±RW)	ThinkVision® L194 Wide 19" LCD Monitor	4434HB6	
	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	
	ADD2 DVI-I PCIe Connection Adapter	73P2516	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>			
Supports ThinkVantage® technologies			
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations)<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>			

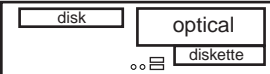
See footnotes for important warranty information  
 US models announced Sep 26 or Oct 24, 2006, or May 1 or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Desktop (8810) - Vista® - withdrawn

Personal Systems Reference (PSREF)


Name	Type-model	Slot x bay	Processor	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Security Chipset	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
M55	8810-H1U	3x3	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	Combo GMA	Q965	Yes	No	Business Basic	3-yr		Jun 07
M55	8810-ERU	3x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD GMA	Q965	Yes	No	Business Premium	3-yr		May 07
M55	8810-EQU	3x3	Core 2 Duo E4300	1.80	2MB	1GB	80GB	Combo GMA	Q965	Yes	No	Business Premium	3-yr		May 07
M55	8810-9NU	3x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD GMA	Q965	Yes	No	Business Premium	3-yr	Gbl	Sep 06

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Stability and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> or <b>E6400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB shared L2 cache</p> <p>Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Desktop</b></p>  <p>Bay ① 5.25", HH 1.6", access, std optical                  Bay ② 3.5", SL 1", access, opt diskette                  Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (25w max), supports optional ADD2 card                  Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.8" W X 15.2" D X 4.2" H</li> <li>• 350mm W X 385mm D X 108mm H</li> <li>• With vertical stand: 5.9" W X 15.2" D X 15.0" H</li> <li>• 18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>• All three bays flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI 2.3)</li> <li>• Toolless systemboard and adapter retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>																																								
Memory	<p><b>1GB std</b> / 8GB max<sup>8</sup> / <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three socket available</p>																																										
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter</p>																																										
SATA disk	<p><b>80GB</b> / SATA300 7200 rpm / vibration dampening mounts</p>																																										
SATA controller	<p>Serial ATA / 300 MB/sec SATA300 / integrated in ICH8</p>																																										
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA150 16-48X Max<sup>4</sup> Drive (41N5618)</p>																																										
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)</p>																																										
SATA cables	<p>Two SATA cables (each 1-drop to device) / 3 SATA connectors</p>																																										
EIDE controller	<p>None</p>																																										
Diskette drive	<p>None</p>																																										
Chipset	<p><b>Intel Q965 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>																																										
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																										
Rear ports	<p>Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)</p>																																										
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>																																										
Audio	<p>High Definition (HD) Audio / AD1983HD codec / SoundMAX® software</p>																																										
Speaker	<p>One internal speaker for business audio</p>																																										
Ethernet	<p>Gigabit ethernet on planar / Broadcom® BCM5755 (PHY/MAC) / PCIe x1</p>																																										
Intel AMT	<p>None</p>																																										
Modem	<p>None</p>																																										
Security chip	<p><b>Trusted Platform Module</b> / in Broadcom® BCM5755 / TCG 1.2-compliant</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>																																								
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>																																										
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>																																										
Power supply	<p>225 watts with variable speed fan / manual switch / 2 diagnostic LEDs</p>																																										
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista Business Edition (32-bit)</p>																																										
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> </ul>																																										
	<p><b>Accessories</b></p> <table border="0"> <tr><td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4983</td></tr> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>512MB PC2-6400 NP DDR2 UDIMM</td><td>41U2976</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB Serial ATA300 Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB Serial ATA300 Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Security Memory Key 4GB</td><td>41U5120</td></tr> <tr><td>USB 2.0 Super Multi-Burner Drive</td><td>41N5565</td></tr> <tr><td>CD-RW/DVD-ROM Combo SATA150 Drive</td><td>41N5619</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Preferred Pro USB Fingerprint Keyboard</td><td>73P4730</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>ThinkVision® L194 Wide 19" LCD Monitor</td><td>4434HB6</td></tr> <tr><td>ThinkVision L220x Wide 22" LCD Monitor</td><td>4433HB2</td></tr> <tr><td>ADD2 DVI-I PCIe Connection Adapter</td><td>73P2516</td></tr> </table> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	512MB PC2-6400 NP DDR2 UDIMM	41U2976	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB Serial ATA300 Disk (7200 rpm)	41N3015	500GB Serial ATA300 Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 Super Multi-Burner Drive	41N5565	CD-RW/DVD-ROM Combo SATA150 Drive	41N5619	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Preferred Pro USB Fingerprint Keyboard	73P4730	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	ThinkVision® L194 Wide 19" LCD Monitor	4434HB6	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	ADD2 DVI-I PCIe Connection Adapter	73P2516	
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	<p>Supports ThinkVantage® technologies</p>																																										
	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																										

See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008

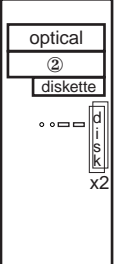
Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	ENERGY STAR 4.0	Intel AMT Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M55	9166-A1U	3x3	Core 2 Duo E6300	2MB	1.86	1GB	80GB <sup>2</sup>	Combo	GMA	Q965	Yes	ES40	No Business	32	3-yr	No Sep07
M55	9166-A2U	3x3	Core 2 Duo E6300	2MB	1.86	1GB	80GB	DVD	GMA	Q965	Yes	ES40	No XP Pro	3-yr	No Sep07	

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB shared L2 cache										<b>Desktop</b>					
Implementation	Processor in FC-LGA6 package in LGA775 socket										Bay ① 5.25", HH 1.6", access, std optical		Bay ② 3.5", SL 1", access, opt diskette		Bay ③ 3.5", SL 1", no access, std disk	
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets available										Slot 1: Low Profile, PCI Express x16 (25w max), supports optional ADD2 card		Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v)		Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> , integrated graphics in Q965, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports dual independent display with optional ADD2 adapter										• Business black color; metal case		• 13.8" W X 15.2" D X 4.2" H		• 350mm W X 385mm D X 108mm H	
SATA disk	<b>80GB</b> , SATA300 7200 rpm, vibration dampening mounts										• With vertical stand: 5.9" W X 15.2" D X 15.0" H		• 18.5 to 22.0 lb (8.4 to 10.0 kg)		• All three bays flip up (latched and pivoting)	
SATA controller	Serial ATA, 300 MB/sec SATA300, integrated in ICH8										• Toolless cover flips up and tilts backward on rear hinges		• Toolless disk, diskette drive, optical drive removal		• Two slots on riser card (PCI 2.3)	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)										• Toolless systemboard and adapter retention		• Steel chassis supports 100 lb (45kg) monitor on top		• No system floor stand for vertical orientation ships std	
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)															
SATA cables	Two SATA cables (each 1-drop to device), 3 SATA connectors															
EIDE controller	None															
Diskette drive	None															
Chipset	<b>Intel Q965 Express Chipset</b> , 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>					
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, AD1983HD codec, SoundMAX® software															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5755 (PHY/MAC), PCIe x1															
Intel AMT	None															
Modem	None															
Security chip	<b>Trusted Platform Module</b> , in Broadcom® BCM5755, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo															
Power supply	275W, variable speed fan, autosensing, 80 PLUS®, ENERGY STAR 4.0-compliant															
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- <i>Some:</i> Microsoft® Windows® XP Professional</li> <li>- <i>Some:</i> Microsoft Windows Vista® Business Edition (32-bit)</li> <li>◇ <i>Vista model:</i> Vista Basic logo</li> </ul>										<b>Accessories</b>					
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec® Client Security™ (XP)</li> <li>• Norton Internet Security™ (90 days of virus definitions) (Vista)</li> <li>• Diskeeper® Lite (XP)</li> <li>• Diskeeper Home (Vista)</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial</li> <li>• Multimedia Center for Think Offerings (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• InterVideo WinDVD (combo, DVD)</li> </ul>										<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>500GB Serial ATA300 Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 1GB 41U4940</li> <li>USB 2.0 Essential Memory Key 2GB 41U4944</li> <li>USB 2.0 Security Memory Key 1GB 41U5118</li> <li>USB 2.0 Security Memory Key 2GB 41U5119</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>CD-RW/DVD-ROM Combo SATA150 Drive 41N5619</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Preferred Pro USB Fingerprint Keyboard 73P4730</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>ThinkVision® L171p 17" LCD Monitor 9417HC2</li> <li>ThinkVision L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L194 Wide 19" LCD Monitor 4434HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>					
Supports ThinkVantage® technologies																
<b>Limited Warranty<sup>1</sup></b>																
<ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																

See footnotes for important warranty information  
 US models announced July 17, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Tower (8811) - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M55	8811-GQU	4x5	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Sep 07
M55	8811-GBU	4x5	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Jun 07
M55	8811-FHU	4x5	Pentium D 925	3.00	2x2MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Oct 06
M55	8811-6CU	4x5	Pentium D 945	3.40	2x2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	W Gbl	Sep 06
M55	8811-6HU	4x5	Pentium D 945	3.40	2x2MB	1GB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Oct 06
M55	8811-6JU	4x5	Pentium D 945	3.40	2x2MB	512MB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr		Oct 06
M55	8811-FSU	4x5	Core 2 Duo E4300	1.80	2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr		May 07
M55	8811-FVU	4x5	Core 2 Duo E4300	1.80	2MB	1GB	160GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		May 07
M55	8811-95U	4x5	Core 2 Duo E6300	1.86	2MB	512MB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8811-96U	4x5	Core 2 Duo E6300	1.86	2MB	1GB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr	Gbl	Sep 06
M55	8811-D1U	4x5	Core 2 Duo E6400	2.13	2MB	512MB	80GB	Combo	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06
M55	8811-D2U	4x5	Core 2 Duo E6400	2.13	2MB	512MB	80GB	DVD	GMA	Q965	Yes	No	XP Pro	3-yr		Sep 06

Positioning Processor	<b>Stability and manageability for the enterprise</b> <b>Intel® Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> or <b>945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6300</b> or <b>E6400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket										<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>			
Implementation	Processor in FC-LGA6 package in LGA775 socket										Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, opt diskette Bay ④ 3.5", SL 1", no access, std disk Bay ⑤ 3.5", SL 1", no access, opt disk			
Memory	<b>512MB</b> or <b>1GB</b> std, 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets available										Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)			
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> , integrated graphics in Q965, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports dual independent display with optional ADD2 adapter										<b>Security</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> <li>USB port disablement</li> </ul> Supports ThinkVantage® technologies			
SATA disk	<b>80GB</b> or <b>160GB</b> , SATA300 7200 rpm, vibration dampening										<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li><b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li><b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li><b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li><b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> </ul> ⇨ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>			
SATA controller	Serial ATA / 300 MB/sec SATA300, integrated in ICH8													
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)													
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)													
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors													
EIDE controller	None										Supports ThinkVantage® technologies			
Diskette drive	None													
Chipset	<b>Intel Q965 Express Chipset</b> , 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMC <sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)										Supports ThinkVantage® technologies			
Audio	High Definition (HD) Audio, AD1983HD codec, SoundMAX <sup>®</sup> software													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Broadcom <sup>®</sup> BCM5755 (PHY/MAC), PCIe x1													
Intel AMT	None													
Modem	None										Supports ThinkVantage® technologies			
Security chip	<b>Trusted Platform Module</b> , in Broadcom <sup>®</sup> BCM5755, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo													
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo													
Power supply	310 watts with variable speed fan, manual switch, 2 diagnostic LEDs													
<b>Preload with Windows XP Professional<sup>5</sup> Accessories</b>													⇨ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	
Microsoft® Windows® XP Professional			512MB PC2-5300 CL5 NP DDR2 UDIMM			73P4983								
- Disk-to-Disk Recovery (in hidden protected area)			1GB PC2-5300 CL5 NP DDR2 UDIMM			73P4984								
			2GB PC2-5300 CL5 NP DDR2 UDIMM			73P4985								
<b>Preloaded</b> (only some listed)			512MB PC2-6400 NP DDR2 UDIMM			41U2976								
• Rescue and Recovery™			1GB PC2-6400 NP DDR2 UDIMM			41U2977								
• Client Security Solution™			2GB PC2-6400 NP DDR2 UDIMM			41U2978								
• ThinkVantage Productivity Center			250GB Serial ATA300 Disk (7200 rpm)			41N3015								
• ThinkVantage System Update			500GB Serial ATA300 Disk (7200 rpm)			43R1990								
• System Migration Assistant			USB 2.0 Lenovo Webcam			40Y8519								
• Symantec® Client Security™			USB 2.0 Security Memory Key 4GB			41U5120								
• PC-Doctor™ (diagnostics)			Super Multi-Burner DL DVD±RW SATA Drive			41N5620								
• Multimedia Center for Think Offerings (combo, DVD)			ThinkVision® L194 Wide 19" LCD Monitor			4434HB6								
• Sonic RecordNow and Drive Letter Access (combo, DVD)			ThinkVision L220x Wide 22" LCD Monitor			4433HB2								
			Laser Tilt Wheel Mouse (USB, PS/2)			41U3074								
			ADD2 DVI-I PCIe Connection Adapter			73P2516								
			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											

See footnotes for important warranty information  
 US models announced Sep 26 or Oct 24, 2006, or May 1, Jun 5, or Sep 4, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Tower (8811) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
M55	8811-GAU	4x5	Pentium E2140	1MB	1.60	1GB	80GB <sup>2</sup>	Combo	GMA	Q965	Yes	No	Business	Basic	3-yr		Jun 07
M55	8811-6SU	4x5	Pentium D 945	2x2MB	3.40	1GB	80GB	DVD	GMA	Q965	Yes	No	Business	Premium	3-yr		Feb 07
M55	8811-6TU	4x5	Pentium D 945	2x2MB	3.40	1GB	80GB	Combo	GMA	Q965	Yes	No	Business	Premium	3-yr		Feb 07
M55	8811-FTU	4x5	Core 2 Duo E4300	2MB	1.80	1GB	80GB	DVD	GMA	Q965	Yes	No	Business	Premium	3-yr		May 07
M55	8811-FUU	4x5	Core 2 Duo E4300	2MB	1.80	1GB	160GB	Combo	GMA	Q965	Yes	No	Business	Premium	3-yr		May 07
M55	8811-B5U	4x5	Core 2 Duo E6300	2MB	1.86	1GB	80GB	DVD	GMA	Q965	Yes	No	Business	Premium	3-yr	Gbl	Feb 07

Positioning Processor	<p><i>Stability and manageability for the enterprise</i>  <b>Intel® Pentium® Dual-Core Processor E2140</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or  <b>Intel Pentium D Processor 925</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or  <b>Intel Core 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB shared L2 cache                      Processor in FC-LGA6 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>		
Implementation	<p><b>1GB std / 8GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three socket available</p>										<p>Bay ① 5.25", HH 1.6", access, std optical                      Bay ② 5.25", HH 1.6", access, open                      Bay ③ 3.5", SL 1", access, opt diskette                      Bay ④ 3.5", SL 1", no access, std disk                      Bay ⑤ 3.5", SL 1", no access, opt disk</p>		
Memory	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter</p>										<p>Slot 1: full-length, full-height, PCI Express x16 (75w max)                      Slot 2: full-length, full-height, PCI Express x1                      Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)                      Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</p>		
Graphics	<p><b>80GB or 160GB</b> / SATA300 7200 rpm / vibration dampening                      SATA controller Serial ATA / 300 MB/sec SATA300 / integrated in ICH8                      SATA DVD <i>Some:</i> DVD-ROM DL SATA150 16-48X Max<sup>4</sup> Drive (41N5618)                      SATA Combo <i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)                      SATA cables Two SATA cables (each 1-drop to device) / four SATA connectors                      EIDE controller None                      Diskette drive None</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> <li>USB port disablement</li> </ul>		
SATA disk	<p><b>Intel Q965 Express Chipset</b> / 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>										<p>Supports ThinkVantage® technologies</p>		
SATA controller	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>										<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		
SATA DVD	<p>High Definition (HD) Audio / AD1983HD codec / SoundMAX® software</p>												
SATA Combo	<p>One internal speaker for business audio</p>												
SATA cables	<p>Gigabit ethernet on planar / Broadcom® BCM5755 (PHY/MAC) / PCIe x1</p>												
EIDE controller	<p>None</p>												
Diskette drive	<p>None</p>												
Chipset	<p><b>Trusted Platform Module</b> / in Broadcom® BCM5755 / TCG 1.2-compliant</p>												
Front ports	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>												
Rear ports	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>												
Rear audio ports	<p>310 watts with variable speed fan / manual switch / 2 diagnostic LEDs</p>												
Audio	<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>Microsoft® Windows® Vista Business Edition (32-bit)</li> </ul>												
Speaker	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>512MB PC2-6400 NP DDR2 UDIMM 41U2976</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>500GB Serial ATA300 Disk (7200 rpm) 43R1990</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Essential Memory Key 2GB 41U4944</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>DVD-ROM DL SATA150 16X-48X Max<sup>4</sup> Drive 41N5618</li> <li>CD-RW/DVD-ROM Combo SATA150 Drive 41N5619</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision™ L194 Wide 19" LCD Monitor 4434HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>												
Ethernet	<p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>System Migration Assistant</li> <li>Norton Internet Security™ (90 days of virus definitions)</li> <li>Diskeeper® Home</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Windows Live™ Toolbar</li> <li>Windows Live Search</li> <li>Picasa from Google</li> </ul>												
Intel AMT	<p>None</p>												
Modem	<p>None</p>												
Security chip	<p>None</p>												
Keyboard	<p>None</p>												
Mouse	<p>None</p>												
Power supply	<p>None</p>												

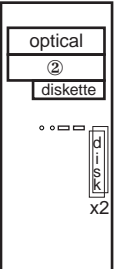
See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55 Tower (9167) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	ENERGY STAR 4.0	Intel AMT Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M55	9167-A1U	4x5	Core 2 Duo E6300	1.86 2MB	1GB	80GB <sup>2</sup>	Combo	GMA	Q965	Yes	ES40	No Business	32	3-yr	No Aug 07
M55	9167-A2U	4x5	Core 2 Duo E6300	1.86 2MB	1GB	80GB	DVD	GMA	Q965	Yes	ES40	No XP Pro	3-yr	No Aug 07	

Positioning Processor	<i>Stability and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E6300</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB shared L2 cache	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul> 
Implementation	Processor in FC-LGA6 package in LGA775 socket	
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> , integrated graphics in Q965, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports dual independent display with optional ADD2 adapter	
SATA disk	<b>80GB</b> , SATA300 7200 rpm, vibration dampening	Bay ① 5.25", HH 1.6", access, std optical
SATA controller	Serial ATA, 300 MB/sec SATA300, integrated in ICH8	Bay ② 5.25", HH 1.6", access, open
SATA DVD	<i>Some</i> : DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)	Bay ③ 3.5", SL 1", access, opt diskette
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)	Bay ④ 3.5", SL 1", no access, std disk
SATA cables	Two SATA cables (each 1-drop to device) / four SATA connectors	Bay ⑤ 3.5", SL 1", no access, opt disk
EIDE controller	None	Slot 1: full-length, full-height, PCI Express x16 (75w max)
Diskette drive	None	Slot 2: full-length, full-height, PCI Express x1
Chipset	<b>Intel Q965 Express Chipset</b> , 82801HB I/O Controller Hub 8 (ICH8) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)	Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, AD1983HD codec, SoundMAX <sup>®</sup> software	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Broadcom <sup>®</sup> BCM5755 (PHY/MAC), PCIe x1	
Intel AMT	None	
Modem	None	
Security chip	<b>Trusted Platform Module</b> , in Broadcom <sup>®</sup> BCM5755, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	280W, variable speed fan, autosensing, 80 PLUS <sup>®</sup> , ENERGY STAR 4.0-compliant	

<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li><i>Some</i>: Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional</li> <li><i>Some</i>: Microsoft Windows Vista<sup>®</sup> Business Edition (32-bit)</li> <li>◇ <i>Vista model</i>: Vista Basic logo</li> </ul> <p><b>Preloaded applications<sup>5</sup></b> (all OSes)</p> <ul style="list-style-type: none"> <li>Rescue and Recovery<sup>™</sup></li> <li>Client Security Solution<sup>™</sup></li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>System Migration Assistant</li> <li>Symantec<sup>®</sup> Client Security<sup>™</sup> (XP)</li> <li>Norton Internet Security<sup>™</sup> (90 days of virus definitions) (Vista)</li> <li>Diskeeper<sup>®</sup> Lite (XP)</li> <li>Diskeeper Home (Vista)</li> <li>PC-Doctor<sup>™</sup> (diagnostics)</li> <li>Adobe<sup>®</sup> Reader</li> <li>Windows Live<sup>™</sup> Toolbar</li> <li>Windows Live Search</li> <li>Picasa from Google</li> <li>Microsoft Office 2007 Trial</li> <li>Multimedia Center for Think Offerings (XP)</li> <li>Sonic RecordNow and Drive Letter Access (combo)</li> <li>InterVideo WinDVD (combo, DVD)</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>500GB Serial ATA300 Disk (7200 rpm) 43R1990</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Essential Memory Key 1GB 41U4940</li> <li>USB 2.0 Essential Memory Key 2GB 41U4944</li> <li>USB 2.0 Security Memory Key 1GB 41U5118</li> <li>USB 2.0 Security Memory Key 2GB 41U5119</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>DVD-ROM DL SATA150 16X-48X Max<sup>4</sup> Drive 41N5618</li> <li>CD-RW/DVD-ROM Combo SATA150 Drive 41N5619</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision<sup>®</sup> L151 15" LCD Monitor 9165AC6</li> <li>ThinkVision L171p 17" LCD Monitor 9417HC2</li> <li>ThinkVision L190x 19" LCD Monitor 4439HB2</li> <li>ThinkVision L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L194 Wide 19" LCD Monitor 4434HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>
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Supports ThinkVantage <sup>®</sup> technologies
<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇨ 3-year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇨ Post warranty maintenance services available</li> <li>⇨ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
 US models announced July 17, 2007  
 US models withdrawn effective May 2008

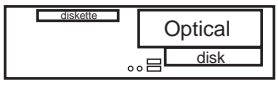


# ThinkCentre® M55p Small (8808) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
<b>M55p</b>	8808-9HU	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB <sup>2</sup>	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Sep 06
<b>M55p</b>	8808-9JU	2x3	Core 2 Duo E6300	1.86	2MB	512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
<b>M55p</b>	8808-9WU	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Dec 06
<b>M55p</b>	8808-KLU	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr	K12	Jun 07
<b>M55p</b>	8808-KKU	2x3	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr	HE	Jun 07
<b>M55p</b>	8808-D7U	2x3	Core 2 Duo E6400	2.13	2MB	512MB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
<b>M55p</b>	8808-D8U	2x3	Core 2 Duo E6400	2.13	2MB	512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
<b>M55p</b>	8808-E2U	2x3	Core 2 Duo E6600	2.40	4MB	512MB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
<b>M55p</b>	8808-E3U	2x3	Core 2 Duo E6600	2.40	4MB	512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
<b>M55p</b>	8808-EFU	2x3	Core 2 Duo E6600	2.40	4MB	1GB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Oct 06
<b>M55p</b>	8808-J3U	2x3	Core 2 Duo E6300	1.86	2MB	2GB	80GB	DVD±RW	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	May 07
<b>M55p</b>	8808-J9U	2x3	Core 2 Duo E6400	2.13	2MB	1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		May 07
<b>M55p</b>	8808-JAU	2x3	Core 2 Duo E6600	2.40	4MB	1GB	160GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		May 07

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate enterprise manageability</i> <b>Intel® Core™ 2 Duo Processor E6300, E6400, or E6600</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and <b>2MB</b> or <b>4MB</b> shared L2 cache	<b>Small</b>	
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>512MB, 1GB, or 2GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 3.5", slim .5", access, opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk  Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)                             <ul style="list-style-type: none"> <li>- optional cable also locks the cover by deactivating the cover release buttons</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device) / 2 SATA connectors		
EIDE controller	None		
Diskette drive	None		
Chipset	<b>Intel Q965 Express Chipset</b> / 82801HDO I/O Controller Hub 8 Digital Office (ICH8DO) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX <sup>®</sup> software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Intel 82566DM (PHY layer; MAC in ICH8DO) / PCIe x1 / Intel AMT / Wake on LAN <sup>®</sup> / ASF 2.0 / PXE 2.0		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Trusted Platform Module, in Atmel <sup>®</sup> AT97SC3203 chip, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	Supports ThinkVantage <sup>®</sup> technologies	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>	
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional - Disk-to-Disk Recovery (in hidden protected area)  <b>Preloaded</b> <ul style="list-style-type: none"> <li>• <i>Some (K12):</i> K-12 education software                             <ul style="list-style-type: none"> <li>- VitalSource Library School Edition</li> <li>- Adobe<sup>®</sup> Instructor Resource Center</li> <li>- Adobe Digital School Collection                                     <ul style="list-style-type: none"> <li>- Photoshop Elements 5 (and CD)</li> <li>- Premier Elements 3 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> </ul> </li> <li>• <i>Some (HE):</i> Higher education software                             <ul style="list-style-type: none"> <li>- VitalSource Library College Edition</li> <li>- Adobe<sup>®</sup> Instructor Resource Center</li> <li>- Adobe Photoshop Elements 5 (and CD)</li> <li>- Adobe Premier Elements 3 (and DVD)</li> </ul> </li> <li>• Rescue and Recovery<sup>™</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec<sup>®</sup> Client Security<sup>™</sup></li> <li>• Diskeeper<sup>®</sup> Lite</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>		

See footnotes for important warranty information  
 US models announced Sep 26, Oct 24, or Nov 21, 2006, or May 1 or June 5, 2007  
 US models withdrawn effective May 2008

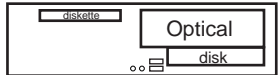
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 (AR1-3) May 2008

# ThinkCentre® M55p Small (8808) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 GHz cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M55p</b>	8808-KMU2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB <sup>2</sup>	Combo	GMA Q965	Yes	IAMT	Business	Basic	3-yr	K12	Jun 07	
<b>M55p</b>	8808-KNU2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB <sup>2</sup>	Combo	GMA Q965	Yes	IAMT	Business	Basic	3-yr	HE	Jun 07	
<b>M55p</b>	8808-HBU2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB <sup>2</sup>	DVD	GMA Q965	Yes	IAMT	Business	Premium	3-yr	Gbl	Feb 07	
<b>M55p</b>	8808-FVU2x3	Core 2 Duo E6300	1.86 2MB	1GB	80GB	DVD	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07	
<b>M55p</b>	8808-FWU2x3	Core 2 Duo E6400	2.13 2MB	1GB	80GB	Combo	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07	
<b>M55p</b>	8808-FSU2x3	Core 2 Duo E6600	2.40 4MB	1GB	160G	DVD±RW	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07	

**• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**  
**• These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate enterprise manageability</i> <b>Intel® Core™ 2 Duo Processor E6300, E6400, or E6600</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus; <i>E6300/E6400:</i> 2MB L2 shared cache; <i>E6600:</i> 4MB L2 shared cache	<b>Small</b>	
Implementation	Processor in FC-LGA6 package in LGA775 socket	Bay ① 3.5", slim .5", access, opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk	
Memory	<b>1GB std / 4GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No system floor stand for vertical orientation ships std</li> </ul>	
SATA disk	<b>80GB or 160GB</b> / SATA300 7200 rpm / dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device) / 2 SATA connectors		
EIDE controller	None		
Diskette drive	None		
Chipset	<b>Intel Q965 Express Chipset</b> / 82801HDO I/O Controller Hub 8 Digital Office (ICH8DO) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX <sup>®</sup> software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Intel 82566DM (PHY layer; MAC in ICH8DO) / PCIe x1 / Intel AMT / Wake on LAN <sup>®</sup> / ASF 2.0 / PXE 2.0		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Trusted Platform Module, in Atmel <sup>®</sup> AT97SC3203 chip, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	225 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
			<b>Security</b>
			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>
			Supports ThinkVantage <sup>®</sup> technologies
			<b>Limited Warranty<sup>1</sup></b>
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	↔ <b>3-year parts and labor</b>
<b>Preloaded applications<sup>5</sup></b> (only some listed)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	↔ <b>International Warranty Service<sup>9</sup></b>
<i>Some (K12):</i> K-12 education software	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>
- VitalSource Library School Edition	512MB PC2-6400 NP DDR2 UDIMM	41U2976	↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>
- Adobe <sup>®</sup> Instructor Resource Center	1GB PC2-6400 NP DDR2 UDIMM	41U2977	• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus <sup>™</sup> part number 41C9192)
- Adobe Digital School Collection	2GB PC2-6400 NP DDR2 UDIMM	41U2978	• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)
- Photoshop Elements 5 (and CD)	250GB Serial ATA300 Disk (7200 rpm)	41N3015	• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)
- Premier Elements 3 (and DVD)	500GB Serial ATA300 Disk (7200 rpm)	43R1990	• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)
- Acrobat 8 Professional (and CD)	USB Portable Diskette Drive	05K9276	• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)
- Contribute 4 (and CD)	USB 2.0 Lenovo Multimedia Headset	40Y8518	↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b>
• <i>Some (HE):</i> Higher education software	USB 2.0 Super Multi-Burner Drive	41N5565	↔ <b>Post warranty maintenance services available</b>
- VitalSource Library College Edition	USB 2.0 Security Memory Key 2GB	41U5119	↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Adobe <sup>®</sup> Instructor Resource Center	USB 2.0 Security Memory Key 4GB	41U5120	
- Adobe Photoshop Elements 5 (and CD)	DVD-ROM DL SATA150 16X-48X Max <sup>4</sup> Drive	41N5618	
- Adobe Premier Elements 3 (and DVD)	CD-RW/DVD-ROM Combo SATA150 Drive	41N5619	
• Rescue and Recovery <sup>™</sup>	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• Client Security Solution <sup>™</sup>	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
• Norton Internet Security <sup>™</sup>	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
	ThinkVision <sup>®</sup> L171p 17" LCD Monitor	9417HC2	
	ThinkVision L190x 19" LCD Monitor	4439HB2	
	ThinkVision L193p 19" LCD Monitor	4431HB2	
	ThinkVision L194 Wide 19" LCD Monitor	4434HB6	
	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	
	ADD2 DVI-I PCIe Connection Adapter	73P2516	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

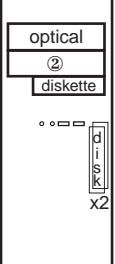
See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55p Tower (8811) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chipset	Security chip	Intel AMT	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
M55p	8811-9SU	4x5	Core 2 Duo E6300	1.86	2MB 1GB	80GB <sup>2</sup>	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Sep 06
M55p	8811-9TU	4x5	Core 2 Duo E6300	1.86	2MB 512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
M55p	8811-FJU	4x5	Core 2 Duo E6300	1.86	2MB 1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Dec 06
M55p	8811-D6U	4x5	Core 2 Duo E6400	2.13	2MB 512MB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
M55p	8811-D7U	4x5	Core 2 Duo E6400	2.13	2MB 512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
M55p	8811-DEU	4x5	Core 2 Duo E6400	2.13	2MB 1GB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Oct 06
M55p	8811-E3U	4x5	Core 2 Duo E6600	2.40	4MB 512MB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
M55p	8811-E4U	4x5	Core 2 Duo E6600	2.40	4MB 512MB	80GB	Combo	GMA	Q965	Yes	IAMT	XP Pro	3-yr		Sep 06
M55p	8811-ECU	4x5	Core 2 Duo E6600	2.40	4MB 1GB	80GB	DVD	GMA	Q965	Yes	IAMT	XP Pro	3-yr	Gbl	Oct 06
M55p	8811-DNU	4x5	Core 2 Duo E6600	2.40	4MB 1GB	160GB	DVD±RW	GMA	Q965	Yes	IAMT	XP Pro	3-yr		May 07
M55p	8811-GHU	4x5	Core 2 Duo E6600	2.40	4MB 1GB	160GB	DVD±RW	GMA	Q965	Yes	IAMT	XP Pro	3-yr	K12	Jun 07
M55p	8811-GJU	4x5	Core 2 Duo E6600	2.40	4MB 1GB	160GB	DVD±RW	GMA	Q965	Yes	IAMT	XP Pro	3-yr	HE	Jun 07

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- These models have a 3-year limited warranty<sup>1</sup>

Positioning	<i>Ultimate enterprise manageability</i>		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7" D X 17.0" H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul> 
Processor	<b>Intel® Core™ 2 Duo Processor E6300, E6400, or E6600</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 2MB or 4MB shared L2 cache		
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>512MB or 1GB std / 8GB max<sup>8</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter		
SATA disk	<b>80GB or 160GB</b> / SATA300 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device) / four SATA connectors		
EIDE controller	None		
Diskette drive	None		
Chipset	<b>Intel Q965 Express Chipset</b> / 82801HDO I/O Controller Hub 8 Digital Office (ICH8DO) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar / Intel 82566DM (PHY layer; MAC in ICH8DO) / PCIe x1 / Intel AMT / Wake on LAN® / ASF 2.0 / PXE 2.0		
Intel AMT	Intel Active Management Technology (IAMT)		
Modem	None		
Security chip	<b>Trusted Platform Module</b> , in Atmel® AT97SC3203, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	310 watts with variable speed fan / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)			
<b>Preloaded</b> <ul style="list-style-type: none"> <li>• <i>Some (K12):</i> K-12 education software                             <ul style="list-style-type: none"> <li>- VitalSource Library School Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Digital School Collection                                     <ul style="list-style-type: none"> <li>- Photoshop Elements 5 (and CD)</li> <li>- Premier Elements 3 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> </ul> </li> <li>• <i>Some (HE):</i> Higher education software                             <ul style="list-style-type: none"> <li>- VitalSource Library College Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Photoshop Elements 5 (and CD)</li> <li>- Adobe Premier Elements 3 (and DVD)</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper® Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>			
<b>Security</b> <ul style="list-style-type: none"> <li>• <i>Some:</i> security chip (see info on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• USB port disablement</li> </ul>			
Supports ThinkVantage® technologies			
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></li> </ul>			

See footnotes for important warranty information  
 US models announced Sep 26, Oct 24, or Nov 21, 2006 or May 1 or June 5, 2007  
 US models withdrawn effective May 2008

# ThinkCentre® M55p Tower (8811) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Security Chipset	Intel AMT	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M55p</b>	8811-FMU	4x5	Core 2 Duo E6300	1.86	2MB	1GB	80GB <sup>2</sup>	DVD	GMA Q965	Yes	IAMT	Business	Premium	3-yr	Gbl	Feb 07
<b>M55p</b>	8811-DKU	4x5	Core 2 Duo E6300	1.86	2MB	1GB	80GB	Combo	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07
<b>M55p</b>	8811-DLU	4x5	Core 2 Duo E6400	2.13	2MB	1GB	80GB	Combo	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07
<b>M55p</b>	8811-DMU	4x5	Core 2 Duo E6600	2.40	4MB	1GB	160GB	Combo	GMA Q965	Yes	IAMT	Business	Premium	3-yr		May 07
<b>M55p</b>	8811-GGU	4x5	Core 2 Duo E6600	2.40	4MB	1GB	160GB	DVD±RW	GMA Q965	Yes	IAMT	Business	Basic	3-yr	K12	Jun 07
<b>M55p</b>	8811-GFU	4x5	Core 2 Duo E6600	2.40	4MB	1GB	160GB	DVD±RW	GMA Q965	Yes	IAMT	Business	Basic	3-yr	HE	Jun 07

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Ultimate enterprise manageability</i> <b>Intel® Core™ 2 Duo Processor E6300, E6400, or E6600</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus; <i>E6300/E6400:</i> 2MB shared L2 cache; <i>E6600:</i> 4MB shared L2 cache		<b>Tower</b>		
Implementation	Processor in FC-LGA6 package in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7" D X 17.0" H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>		
Memory	<b>1GB std / 8GB max<sup>3</sup> / PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three socket available		Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, opt diskette Bay ④ 3.5", SL 1", no access, std disk Bay ⑤ 3.5", SL 1", no access, opt disk Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)		
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in Q965 / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display with optional ADD2 adapter				
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening				
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH8				
SATA DVD	<i>Some:</i> DVD-ROM DL SATA150 16-48X Max <sup>4</sup> Drive (41N5618)				
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA150 Drive (41N5619)				
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA150 Drv (41N5620)				
SATA cables	Two SATA cables (each 1-drop to device) / five SATA connectors				
EIDE controller	None				
Diskette drive	None				
Chipset	<b>Intel Q965 Express Chipset</b> / 82801HDO I/O Controller Hub 8 Digital Office (ICH8DO) for SATA300, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>5</sup> SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Eight USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (DB-15)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)				
Audio	High Definition (HD) Audio / AD1983HD codec / SoundMAX <sup>6</sup> software				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar / Intel 82566DM (PHY layer; MAC in ICH8DO) / PCIe x1 / Intel AMT / Wake on LAN <sup>7</sup> / ASF 2.0 / PXE 2.0				
Intel AMT	Intel Active Management Technology (iAMT)				
Modem	None				
Security chip	<b>Trusted Platform Module</b> , Atmel <sup>8</sup> AT97SC3203 chip, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo				
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo				
Power supply	310 watts with variable speed fan / manual switch / 2 diagnostic LEDs				
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)				
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<i>Some (K12):</i> K-12 education software - VitalSource Library School Edition - Adobe <sup>®</sup> Instructor Resource Center - Adobe Digital School Collection - Photoshop Elements 5 (and CD) - Premier Elements 3 (and DVD) - Acrobat 8 Professional (and CD) - Contribute 4 (and CD) <i>Some (HE):</i> Higher education software - VitalSource Library College Edition - Adobe <sup>®</sup> Instructor Resource Center - Adobe Photoshop Elements 5 (and CD) - Adobe Premier Elements 3 (and DVD) • Rescue and Recovery™ • Client Security Solution™ • Norton Internet Security™		<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 512MB PC2-6400 NP DDR2 UDIMM 41U2976 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB Serial ATA300 Disk (7200 rpm) 41N3015 500GB Serial ATA300 Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 Super Multi-Burner Drive 41N5565 CD-RW/DVD-ROM Combo SATA150 Drive 41N5619 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 ThinkVision <sup>®</sup> L194 Wide 19" LCD Monitor 4434HB6 ThinkVision <sup>®</sup> L220x Wide 22" LCD Monitor 4433HB2 ADD2 DVI-I PCIe Connection Adapter 73P2516 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
					Supports ThinkVantage <sup>®</sup> technologies
					<b>Limited Warranty<sup>1</sup></b> ⇨ 3-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ Post warranty maintenance services available ⇨ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378

See footnotes for important warranty information  
 US models announced February 6, May 1, or June 5, 2007  
 US models withdrawn effective May 2008



Lenovo ThinkCentre M57e Small



Lenovo ThinkCentre M57e Small



Lenovo ThinkCentre M57e Desktop



Lenovo ThinkCentre M57e Desktop with Lenovo ThinkVision monitor



Lenovo ThinkCentre M57e Tower



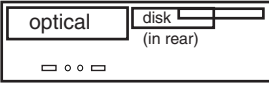
Lenovo ThinkCentre M57e Tower with dual Lenovo ThinkVision monitors

# ThinkCentre® M57e Small (6305) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
M57e	6305-B1U	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro		None	Jun 08
M57e	6305-B2U	2x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro		None	Jun 08
M57e	6305-B4U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD	GMA	XP Pro		None	Jun 08
M57e	6305-B3U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro		None	Jun 08
M57e	6305-B5U	2x3	Core 2 Duo E8400	3.00	6MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro		None	Jun 08
M57e	6305-B6U	2x3	Core 2 Quad Q6600	2.40	8MB	Quad	2GB	160GB	DVD±RW	GMA	XP Pro		None	Jun 08
M57e	6305-B7U	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	DVD	GMA	Business32	Premium	None	Sep 08
M57e	6305-B8U	2x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	Business32	Premium	None	Sep 08
M57e	6305-B9U	2x3	Core 2 Quad Q6600	2.40	8MB	Quad	2GB	160GB	DVD±RW	GMA	Business32	Premium	None	Sep 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Stability and manageability for small and medium businesses</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E7200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q6600</b> with quad-core (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 8MB L2 cache</p> <p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>	<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>																								
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket																									
Memory	<p><b>1GB or 2GB std.</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available</p>																									
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>																									
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																									
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																									
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive																									
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																									
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																									
eSATA port	None																									
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar																									
Diskette drive	None																									
Media reader	None																									
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express<sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech<sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																									
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																									
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)																									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																									
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec																									
Speaker	One internal speaker for business audio																									
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>																									
Intel AMT	None																									
Modem	None																									
Security chip	None																									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo																									
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																									
Power supply	280 watts with variable speed fan, autosensing																									
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some:</i> Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</p> <p>- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)</p>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>ThinkVision<sup>®</sup> L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	USB 2.0 Lenovo Multimedia Headset	40Y8518	ThinkVision <sup>®</sup> L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962
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<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• Norton Internet Security<sup>™</sup></li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)</li> </ul>																									
		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage<sup>®</sup> technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																								

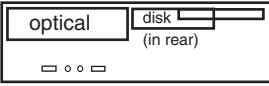
See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Small (6305) - TopSeller (October 2008) - withdrawn

Personal Systems Reference (PSREF)

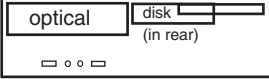
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
M57e	6305-BBU	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	Premium	None	Nov 08
M57e	6305-BCU	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	Premium	None	Nov 08
M57e	6305-BEU	2x3	Core 2 Duo E7300	2.66	3MB	2	1GB	160GB	DVD	GMA	XP Pro	Premium	None	Nov 08
M57e	6305-BDU	2x3	Core 2 Duo E7300	2.66	3MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	Premium	None	Nov 08

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<b>Stability and manageability for small and medium businesses</b> <b>Intel® Pentium® Dual-Core Processor E5200 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<b>Small</b> 																																																																										
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)																																																																										
Memory	<b>1GB or 2GB std,</b> 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3																																																																										
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>																																																																										
SATA disk	<b>160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH7 <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																																										
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Chipset	<b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions																																																																												
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See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9482-BGU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr		Mar 08
M57e	9482-BHU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr		Mar 08
M57e	9482-BKU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	DVD	GMA	XP Pro	3-yr		Mar 08
M57e	9482-BJU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr		Mar 08
M57e	9482-BLU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	K12	Mar 08
M57e	9482-BMU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	HE	Mar 08
M57e	9482-BPU	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	DVD	GMA	XP Pro	3-yr		Mar 08
M57e	9482-BNU	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr		Mar 08
M57e	9482-DAU	2x3	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr		Mar 08

Positioning	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2160 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or</p> <p><b>Intel Core™ 2 Duo Processor E4500 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or</p> <p><b>Intel Core 2 Duo Processor E6550 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 4MB shared L2 cache or</p> <p><b>Intel Core 2 Duo Processor E8200 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache</p> <p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>	<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
Processor		
Implementation		
Memory	<p><b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available</p>	
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>	

SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar
eSATA port	None
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar
Diskette drive	None
Media reader	None
Chipset	<p><b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express<sup>®</sup> x1, PCI 2.3, USB, LPC bus /</p> <p>ITE Tech<sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec
Speaker	One internal speaker for business audio
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>
Intel AMT	None
Modem	None
Security chip	None
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo
Power supply	280 watts with variable speed fan, autosenesing

<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
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<p>Supports ThinkVantage<sup>®</sup> technologies</p> <p>RoHS-compliant</p>
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<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
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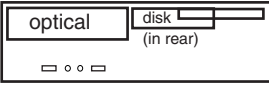
<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</li> <li>↪ Disk-to-Disk Recovery (in hidden protected area)</li> </ul> <p><b>Preloaded applications<sup>5</sup> (only some listed)</b></p> <ul style="list-style-type: none"> <li>• <i>Some (K12):</i> K-12 education software                     <ul style="list-style-type: none"> <li>- VitalSource Library School Edition</li> <li>- Adobe<sup>®</sup> Instructor Resource Center</li> <li>- Adobe Digital School Collection                             <ul style="list-style-type: none"> <li>- Photoshop Elements 5 (and CD)</li> <li>- Premier Elements 3 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> </ul> </li> <li>• <i>Some (HE):</i> Higher education software                     <ul style="list-style-type: none"> <li>- VitalSource Library College Edition</li> <li>- Adobe Instructor Resource Center</li> <li>- Adobe Photoshop Elements 5 (and CD)</li> <li>- Adobe Premier Elements 3 (and DVD)</li> </ul> </li> <li>• Rescue and Recovery<sup>™</sup></li> </ul>	<p><b>Accessories</b></p> <table border="1"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ThinkVision<sup>®</sup> L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision <sup>®</sup> L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984																																		
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985																																		
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ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961																																		
ATI Radeon HD 2400 XT 256MB	43R1962																																		

See footnotes for important warranty information  
 US models announced February 26 or March 18, 2008  
 US models withdrawn effective September 2008, January 2009, or May 2009



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9482-HJU	2x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr	None	Sep 08
M57e	9482-HKU	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	DVD	GMA	XP Pro	3-yr	None	Sep 08
M57e	9482-HLU	2x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro	3-yr	None	Sep 08
M57e	9482-HHU	2x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD	GMA	XP Pro	3-yr	None	Sep 08
M57e	9482-HFU	2x3	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	DVD±RW	GMA+ADD2	XP Pro	3-yr	None	Sep 08
M57e	9482-HGU	2x3	Core 2 Duo E7300	2.66	3MB	Dual	2GB	160GB	DVD	GMA	XP Pro	3-yr	None	Sep 08

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Dual-Core Processor E2180 or E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E7200 or E7300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max)* Slot 2: Low Profile, 32-bit PCI 2.3 * used in some models
Graphics	<i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b> , PCI Express® adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
eSATA port	None	
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models)	
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosenesing	
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® XP Professional with Vista® COA ⇨ Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded applications<sup>5</sup></b> • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • System Migration Assistant • Norton Internet Security™ (90 days of virus definitions) • Diskeeper® Home • PC-Doctor™ (diagnostics) • Adobe® Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • Microsoft Office 2007 Trial (60-day) • Multimedia Center for Think Offerings (DVD, DVD±RW) • Sonic RecordNow and Drive Letter Access (DVD±RW) • Corel® WinDVD® (DVD, DVD±RW) • Corel WinDVD Creator (DVD±RW)		<b>Accessories</b> 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>
		Supports ThinkVantage® technologies
		RoHS-compliant
		<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Small (9482) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57e</b>	9482-AUU	2x3	Celeron 420	1.60	512KB	Single	1GB	160GB <sup>2</sup>	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AAU	2x3	Celeron 430	1.80	512KB	Single	1GB	80GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-ABU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	80GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-ACU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	80GB	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AVU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AWU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-ADU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	80GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AEU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	80GB	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-B1U	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-B2U	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AFU	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	80GB	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-AGU	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	80GB	DVD±RW	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-B6U	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9482-B5U	2x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	Combo	GMA	Bus32	3-yr	None	Mar 08

Positioning	<b>Mainstream enterprise stability and manageability</b>								<b>Small</b>	
Processor	<b>Intel® Celeron® Processor 420 or 430</b> with single-core, Intel 64 Technology, EDBit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket									
Implementation	Processor in FC-LGA6 package in LGA775 socket								<b>Bay ①</b> 5.25", 1.6" high, access, std optical <b>Bay ②</b> 3.5", 1" high, no access, std disk <b>Bay ③</b> 3.5", .5" high, access, open (reader/diskette)  Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3  <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
Memory	<b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available									
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter									
SATA disk	<b>80GB</b> or <b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening								<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7									
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive								Supports ThinkVantage® technologies  RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>	
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive									
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive									
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar									
eSATA port	None									
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar									
Diskette drive	None									
Media reader	None									
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)									
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)									
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)									
Audio	High Definition (HD) Audio, Realtek® ALC662 codec									
Speaker	One internal speaker for business audio									
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®									
Intel AMT	None									
Modem	None									
Security chip	None									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo									
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo									
Power supply	280 watts with variable speed fan, autosenesing									
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>									
- Microsoft® Windows® Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM							73P4984		
↪ Vista Basic logo	2GB PC2-5300 CL5 NP DDR2 UDIMM							73P4985		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	1GB PC2-6400 NP DDR2 UDIMM							41U2977		
• Rescue and Recovery™	2GB PC2-6400 NP DDR2 UDIMM							41U2978		
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm)							43R1990		
• ThinkVantage Productivity Center	USB 2.0 Lenovo Multimedia Headset							40Y8518		
• Norton Internet Security™	ThinkVision® L2440p Wide 24" Monitor							4420HB2		
• Diskeeper® Home	Wireless Kbd & Opt Wheel Mouse (via USB)							73P4067		
• Microsoft Office 2007 Trial (60-day)	Kensington Cable Lock from Lenovo							73P2582		
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	ADD2 DVI-I PCIe Connection Adapter							73P2516		
• Corel® WinDVD® (combo, DVD, DVD±RW)	ADD2 DVI-D Monitor Connection (HDCP)							43R1985		
	ATI™ Radeon™ HD 2400 Pro 128MB							43R1961		
	ATI Radeon HD 2400 XT 256MB							43R1962		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>									

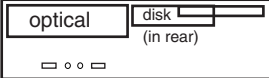
See footnotes for important warranty information  
 US models announced February 19, 2008  
 US models withdrawn effective September 2008, January 2009, or May 2009

# ThinkCentre® M57e Small (9482) - Vista® (March 2008) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Floor stand	Vista preload	Vista logo	Global Educ	Avail date
M57e	9482-B8U	2x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	Stand	Bus32	Basic	Gbl	Sep 08
M57e	9482-E9U	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	Combo	GMA	Stand	Bus32	Basic	Gbl	Mar 08
M57e	9482-FLU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	Stand	Bus32	Basic	Educ	Apr 08
M57e	9482-FAU	2x3	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	Combo	GMA+ADD2	Stand	Bus32	Basic	Gbl	Mar 08
M57e	9482-DBU	2x3	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Combo	GMA	Stand	Bus32	Basic	Gbl	Mar 08
M57e	9482-FBU	2x3	Core 2 Duo E8400	3.00	6MB	Dual	2GB	250GB	DVD±RW	GMA+ADD2	Stand	Bus32	Prem	Gbl	Mar 08

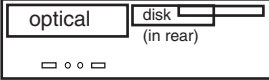
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Pentium® Dual-Core Processor E2180 or E2200 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500 or E4600 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 or E8400 with dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)																																																														
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		Slot 1: Low Profile, PCI Express x16 (35w max)* Slot 2: Low Profile, 32-bit PCI 2.3 * used in some models																																																														
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some:</i> system floor stand for vertical orientation</li> </ul>																																																														
Graphics	<i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-I PCIe Connection Adapter</b> , PCI Express <sup>®</sup> adapter in PCIe x16 slot, provides DVI-I connector to support second monitor, no DVI-to-VGA dongle		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																																																														
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		Supports ThinkVantage® technologies RoHS-compliant <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>																																																														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																																																																
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive																																																																
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SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																																																																
eSATA port	None																																																																
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar																																																																
Diskette drive	None																																																																
Media reader	None																																																																
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions																																																																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																																
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-I in some models)																																																																
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)																																																																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																																																
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																																																																
Speaker	One internal speaker for business audio																																																																
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®																																																																
Intel AMT	None																																																																
Modem	None																																																																
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Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																																
Power supply	280 watts with variable speed fan, autosensing																																																																
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Microsoft® Windows® Vista Business Edition (32-bit)</td> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td></td> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td></td> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td></td> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td></td> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td></td> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td></td> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>ThinkVision® L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td></td> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td></td> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td></td> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td></td> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td></td> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td></td> <td>ATI™ Radeon™ HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td></td> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td></td> <td>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></td> <td></td> </tr> <tr> <td></td> <td>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></td> <td></td> </tr> </table>		- Microsoft® Windows® Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984		2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985		1GB PC2-6400 NP DDR2 UDIMM	41U2977		2GB PC2-6400 NP DDR2 UDIMM	41U2978		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		USB 2.0 Lenovo Multimedia Headset	40Y8518		USB 2.0 Lenovo Webcam	40Y8519		USB 2.0 Essential Memory Key 32GB	45K1258		USB 2.0 Ultra Secure Memory Key 8GB	45J5918		USB 2.0 Portable Secure 320GB Hard Disk	43R2019		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		ThinkVision® L2240p Wide 22" Monitor	4422HB6		ThinkVision L2440p Wide 24" Monitor	4420HB2		Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		Kensington Cable Lock from Lenovo	73P2582		ADD2 DVI-I PCIe Connection Adapter	73P2516		ADD2 DVI-D Monitor Connection (HDCP)	43R1985		ATI™ Radeon™ HD 2400 Pro 128MB	43R1961		ATI Radeon HD 2400 XT 256MB	43R1962		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
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<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource Library College Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Digital School Collection                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6 (and CD)</li> <li>- Premier Elements 4 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD±RW)</li> </ul>																																																																

See footnotes for important warranty information  
 US models announced March 18, March 25, or August 19, 2008  
 US models withdrawn effective September 2008 or May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
M57e	9482-H1U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	Business32	Basic		Jul 08
M57e	9482-F9U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD±RW	GMA	Business32	Basic	Educ	Jul 08
M57e	9482-HCU	2x3	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	DVD±RW	GMA	Business32	Premium	Educ	Sep 08

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7200 or E7300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	None			
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing			
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Microsoft<sup>®</sup> Windows<sup>®</sup> Vista Business Edition (32-bit)</li> </ul>		Supports ThinkVantage <sup>®</sup> technologies	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some</i>: Education software</li> <li>- VitalSource Library College Edition</li> <li>- Adobe<sup>®</sup> Instructor Resource Center</li> <li>- Adobe Digital School Collection                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6 (and CD)</li> <li>- Premier Elements 4 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD±RW)</li> </ul>		RoHS-compliant	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision<sup>®</sup> L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

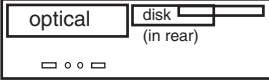
See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Small (9482) - Vista® (October 2008) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
<b>M57e</b>	9482-H8U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	Business32	Premium	None	Nov 08
<b>M57e</b>	9482-H9U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB	DVD±RW	GMA	Business32	Premium	None	Nov 08
<b>M57e</b>	9482-J1U	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB	DVD±RW	GMA	Business32	Premium	None	Nov 08

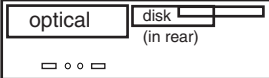
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning	<i>Mainstream enterprise stability and manageability</i>								<b>Small</b>					
Processor	<b>Intel® Pentium® Dual-Core Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache													
Implementation	Processor in FC-LGA6 package in LGA775 socket													
Memory	<b>1GB</b> or <b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available								Bay ① 5.25", 1.6" high, access, std optical		Bay ② 3.5", 1" high, no access, std disk			
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter								Bay ③ 3.5", .5" high, access, open (reader/diskette)		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3			
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts								• Business black color; metal case		• 12.5" W X 14.0" D X 3.9" H			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7								• 317mm W X 355mm D X 99mm H		• 16.1 lb (7.3 kg) in maximum configuration			
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive								• Bays 1, 2, 3 flip up (latched and pivoting)		• Toolless cover flips up and tilts backward on rear hinges			
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive								• Toolless disk, diskette drive, optical drive removal		• Toolless adapter retention			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors								• Toolless systemboard retention		• Steel chassis supports 100 lb (45kg) monitor on top			
eSATA port	None								• System floor stand for vertical orientation					
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector													
Diskette drive	None													
Media reader	None													
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions								<b>Security</b>					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)								• Security slot (in rear for attachment of optional Kensington <sup>®</sup> Microsaver <sup>®</sup> cable)					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)								- optional cable also locks the cover by deactivating the cover release buttons					
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)								• Power-on password					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)								• Administrator password					
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec								• Hard disk password					
Speaker	One internal speaker for business audio								• Boot sequence control					
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>								• Boot without keyboard, mouse, diskette					
Intel AMT	None								• Serial port I/O control					
Modem	None								• Parallel port I/O control					
Security chip	None								• USB port disablement					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, autosenesing													
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>								Supports ThinkVantage <sup>®</sup> technologies					
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984								RoHS-compliant					
	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985													
<b>Preloaded applications<sup>5</sup></b>	1GB PC2-6400 NP DDR2 UDIMM 41U2977													
• Rescue and Recovery <sup>™</sup>	2GB PC2-6400 NP DDR2 UDIMM 41U2978													
• Client Security Solution <sup>™</sup>	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015													
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990													
• System Migration Assistant	USB Portable Diskette Drive 05K9276													
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)	USB 2.0 Lenovo Multimedia Headset 40Y8518													
• Diskeeper <sup>®</sup> Home	USB 2.0 Lenovo Webcam 40Y8519													
• PC-Doctor <sup>™</sup> (diagnostics)	USB 2.0 Essential Memory Key 32GB 45K1258													
• Adobe <sup>®</sup> Reader	USB 2.0 Security Memory Key 4GB 41U5120													
• Windows Live <sup>™</sup> Toolbar	USB 2.0 Ultra Secure Memory Key 4GB 45J5917													
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 8GB 45J5918													
• Picasa from Google	USB 2.0 Portable Secure 320GB Hard Disk 43R2019													
• Microsoft Office 2007 Trial (60-day)	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618													
• Sonic RecordNow and Drive Letter Access (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620													
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)	ThinkVision <sup>®</sup> L1700p 17" Monitor 9417HE2													
	ThinkVision L1940p Wide 19" Monitor 4424HB6													
	ThinkVision L2240p Wide 22" Monitor 4422HB6													
	ThinkVision L2440p Wide 24" Monitor 4420HB2													
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067													
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074													
	Kensington Cable Lock from Lenovo 73P2582													
	ADD2 DVI-I PCIe Connection Adapter 73P2516													
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985													
	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB 43R1961													
	ATI Radeon HD 2400 XT 256MB 43R1962													
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>													
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
									<b>Limited Warranty<sup>1</sup></b> ⇒ <b>3-year parts and labor</b> ⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus <sup>™</sup> part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇒ <b>Post warranty maintenance services available</b> ⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>					

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 4.0	Floor stand	Vista preload	Vista logo	Global Educ	Avail date
M57e	9487-ADU	2x3	Core 2 Duo E4600	2.40	2MB	Dual 1GB	160GB <sup>2</sup>	Combo	GMA	ES40	Stand	Bus32	Basic	Gbl	Mar 08
M57e	9487-AFU	2x3	Core 2 Duo E4600	2.40	2MB	Dual 1GB	160GB	Combo	GMA+ADD2	ES40		Bus32	Basic	Gbl	Mar 08
M57e	9487-AEU	2x3	Core 2 Duo E8200	2.66	6MB	Dual 1GB	160GB	Combo	GMA	ES40	Stand	Bus32	Basic	Gbl	Mar 08
M57e	9487-AGU	2x3	Core 2 Duo E8400	3.00	6MB	Dual 2GB	250GB	DVD±RW	GMA+ADD2	ES40		Bus32	Prem	Gbl	Mar 08

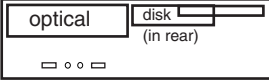
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E4600 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 or E8400 with dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette) Slot 1: Low Profile, PCI Express x16 (35w max)* Slot 2: Low Profile, 32-bit PCI 2.3 * used in some models
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some:</i> system floor stand for vertical orientation</li> </ul>
Graphics	<i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-I PCIe Connection Adapter</b> , PCI Express <sup>®</sup> adapter in PCIe x16 slot, provides DVI-I connector to support second monitor, no DVI-to-VGA dongle		
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage<sup>®</sup> technologies</p> <p>EPEAT™ Gold rating ENERGY STAR 4.0-compliant RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-I in some models)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvel® 88E8056, PCIe x1, Wake on LAN <sup>®</sup>		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 80% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Microsoft® Windows® Vista® Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
<b>Preloaded applications<sup>5</sup></b>	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
• Rescue and Recovery™	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
• Client Security Solution™	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• System Migration Assistant	USB 2.0 Lenovo Multimedia Headset	40Y8518	
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Lenovo Webcam	40Y8519	
• Diskeeper® Home	USB 2.0 Essential Memory Key 32GB	45K1258	
• PC-Doctor™ (diagnostics)	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	
• Adobe® Reader	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	
• Windows Live™ Toolbar	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	
• Windows Live Search	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• Picasa from Google	ThinkVision® L1940p Wide 19" Monitor	4424HB6	
• Microsoft Office 2007 Trial (60-day)	ThinkVision L2240p Wide 22" Monitor	4422HB6	
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	ThinkVision L2440p Wide 24" Monitor	4420HB2	
• Corel® WinDVD® (combo, DVD±RW)	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
	Kensington Cable Lock from Lenovo	73P2582	
	ADD2 DVI-I PCIe Connection Adapter	73P2516	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	
	ATI Radeon HD 2400 XT 256MB	43R1962	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
US models announced March 18, 2008  
US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 4.0	Preload	Vista logo	Global Educ	Avail date
M57e	9487-B3U	2x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	ES40	XP Pro	None	Sep 08	
M57e	9487-B4U	2x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	ES40	XP Pro	None	Sep 08	
M57e	9487-B5U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	XP Pro	None	Sep 08	
M57e	9487-B6U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD	GMA	ES40	XP Pro	None	Sep 08	
M57e	9487-B1U	2x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	Bus32	Basic	None	Jul 08
M57e	9487-B7U	2x3	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	Bus32	Prem	None	Sep 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning	Mainstream enterprise stability and manageability										Small				
Processor	Intel® Pentium® Dual-Core Processor E2180 or E2200 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or Intel Core™ 2 Duo Processor E7200 or E7300 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache														
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)				
Memory	1GB or 2GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets; Non-italics: standard memory in one socket; one socket available										Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3				
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>				
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7														
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive														
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors														
eSATA port	None														
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar														
Diskette drive	None														
Media reader	None														
Chipset	Intel G31 Express Chipset; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)														
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®														
Intel AMT	None														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 80% PSU														
<b>Preloaded operating system<sup>20</sup></b> - Some: Microsoft® Windows® XP Professional with Vista® COA - Some: Microsoft Windows Vista Business Edition (32-bit) <b>Preloaded applications<sup>5</sup> (all OSes)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW) (XP)</li> </ul>										<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>					
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>															

See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

**ThinkCentre® M57e Small (6178) - ENERGY STAR® 4.0 (GMP) - withdrawn** *Personal Systems Reference (PSREF)*

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 4.0	Vista preload	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
<b>M57e</b>	6178-B1U	2x3	Core 2 Duo E8400	3.00	6MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	ES40	Business32	3-yr	G P	Jul 08

• **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

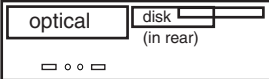
Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical	Bay ② 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max)	Slot 2: Low Profile, 32-bit PCI 2.3
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	None			
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions		<b>Security</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvel <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosenesing, 80% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista <sup>®</sup> Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM		73P4984	
◇ Vista Basic logo	2GB PC2-5300 CL5 NP DDR2 UDIMM		73P4985	
<b>Preloaded applications<sup>5</sup></b>	1GB PC2-6400 NP DDR2 UDIMM		41U2977	
• Rescue and Recovery <sup>™</sup>	2GB PC2-6400 NP DDR2 UDIMM		41U2978	
• Client Security Solution <sup>™</sup>	250GB SATA 3.0Gb/s Disk (7200 rpm)		41N3015	
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990	
• System Migration Assistant	USB Portable Diskette Drive		05K9276	
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)	USB 2.0 Lenovo Multimedia Headset		40Y8518	
• Diskeeper <sup>®</sup> Home	USB 2.0 Lenovo Webcam		40Y8519	
• PC-Doctor <sup>™</sup> (diagnostics)	USB 2.0 Essential Memory Key 32GB		45K1258	
• Adobe <sup>®</sup> Reader	USB 2.0 Security Memory Key 4GB		41U5120	
• Windows Live <sup>™</sup> Toolbar	USB 2.0 Ultra Secure Memory Key 2GB		45J5916	
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 4GB		45J5917	
• Picasa from Google	USB 2.0 Ultra Secure Memory Key 8GB		45J5918	
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Portable 160GB Hard Disk		43R1784	
• Sonic RecordNow and Drive Letter Access (DVD±RW)	USB 2.0 Portable Secure 320GB Hard Disk		43R2019	
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive		41N5620	
	ThinkVision <sup>®</sup> L1700p 17" Monitor		9417HE2	
	ThinkVision L1940p Wide 19" Monitor		4424HB6	
	ThinkVision L2240p Wide 22" Monitor		4422HB6	
	ThinkVision L2440p Wide 24" Monitor		4420HB2	
	Wireless Kbd & Opt Wheel Mouse (via USB)		73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2)		41U3074	
	Kensington Cable Lock from Lenovo		73P2582	
	ADD2 DVI-I PCIe Connection Adapter		73P2516	
	ADD2 DVI-D Monitor Connection (HDCP)		43R1985	
	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB		43R1961	
	ATI Radeon HD 2400 XT 256MB		43R1962	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
Supports ThinkVantage <sup>®</sup> technologies			EPEAT <sup>™</sup> Gold rating	
			ENERGY STAR 4.0-compliant	
			RoHS-compliant	
			<b>Limited Warranty<sup>1</sup></b>	
			↔ <b>3-year parts and labor</b>	
			↔ <b>International Warranty Service<sup>9</sup></b>	
			↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
			↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>	
			• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus <sup>™</sup> part number 41C9194)	
			• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)	
			• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)	
			↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>	
			↔ <b>Post warranty maintenance services available</b>	
			↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
 US model announced June 24, 2008  
 US model withdrawn effective May 2009



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
M57e	7066-AAU	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB <sup>2</sup>	Combo	GMA	Business32	Basic	3-yr	G P	Apr 08

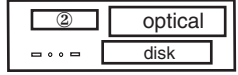
• This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Dual-Core Processor E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 1MB shared L2 cache	<b>Small</b>	
Implementation	non-parity, dual-channel capable, two 240-pin DIMM sockets; Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA Combo	CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo	Supports ThinkVantage <sup>®</sup> technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		RoHS-compliant
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista <sup>®</sup> Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984		
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985		
• Rescue and Recovery <sup>™</sup>	1GB PC2-6400 NP DDR2 UDIMM 41U2977		
• Client Security Solution <sup>™</sup>	2GB PC2-6400 NP DDR2 UDIMM 41U2978		
• ThinkVantage Productivity Center	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015		
• System Migration Assistant	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990		
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)	USB 2.0 Lenovo Multimedia Headset 40Y8518		
• Diskkeeper <sup>®</sup> Home	USB 2.0 Lenovo Webcam 40Y8519		
• PC-Doctor <sup>™</sup> (diagnostics)	USB 2.0 Essential Memory Key 32GB 45K1258		
• Adobe <sup>®</sup> Reader	USB 2.0 Ultra Secure Memory Key 2GB 45J5916		
• Windows Live <sup>™</sup> Toolbar	USB 2.0 Ultra Secure Memory Key 4GB 45J5917		
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 8GB 45J5918		
• Picasa from Google	USB 2.0 Portable 160GB Hard Disk 43R1784		
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Portable Secure 320GB Hard Disk 43R2019		
• Sonic RecordNow and Drive Letter Access (combo)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620		
• Corel <sup>®</sup> WinDVD <sup>®</sup> (combo)	ThinkVision <sup>®</sup> L1700p 17" Monitor 9417HE2		
	ThinkVision L1940p Wide 19" Monitor 4424HB6		
	ThinkVision L2240p Wide 22" Monitor 4422HB6		
	ThinkVision L2440p Wide 24" Monitor 4420HB2		
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067		
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074		
	Kensington Cable Lock from Lenovo 73P2582		
	ADD2 DVI-I PCIe Connection Adapter 73P2516		
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985		
	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB 43R1961		
	ATI Radeon HD 2400 XT 256MB 43R1962		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
		<p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations)<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus<sup>™</sup> part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
 US model announced March 18, 2008  
 US model withdrawn effective May 2009

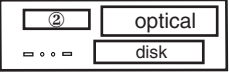
# ThinkCentre® M57e Desktop (9481) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57e</b>	9481-A1U	4x3	Celeron 420	1.60	512KB	Single	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr	None	Mar 08
<b>M57e</b>	9481-A6U	4x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	None	Mar 08
<b>M57e</b>	9481-A2U	4x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	None	Mar 08
<b>M57e</b>	9481-A7U	4x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	DVD±RW	GMA	XP Pro	3-yr	None	Mar 08
<b>M57e</b>	9481-BAU	4x3	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Combo	GMA	XP Pro	3-yr	None	Mar 08
Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 4MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket								<b>Desktop</b>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, open (reader/diskette) Bay ③ 3.5", 1" high, no access, std disk					
Implementation	<b>1GB std</b> , 4GB max <sup>a</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available								<b>Slot 1</b> : Low Profile, PCI Express x16 (35w max) <b>Slot 2</b> : Low Profile, PCI Express x1 <b>Slot 3</b> : Low Profile, 32-bit PCI 2.3 <b>Slot 4</b> : Low Profile, 32-bit PCI 2.3					
Memory									<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>					
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter													
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in ICH7 SATA DVD <i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive SATA Combo <i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive SATA DVD±RW <i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors on planar eSATA port None EIDE controller Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar Diskette drive None Media reader None													
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)													
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN <sup>®</sup>													
Intel AMT	None													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	220 watts with variable speed fan, manual switch													
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>ThinkVision® L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>													
- Microsoft® Windows® XP Professional with Vista® COA														
◆ Disk-to-Disk Recovery (in hidden protected area)														
<b>Preloaded applications<sup>5</sup></b> (only some listed)														
• Rescue and Recovery™														
• Client Security Solution™														
• ThinkVantage Productivity Center														
• System Migration Assistant														
• Norton Internet Security™														
• Diskeeper® Home														
• Microsoft Office 2007 Trial (60-day)														
• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)														
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)														
• Corel® WinDVD® (combo, DVD, DVD±RW)														
• Corel WinDVD Creator (DVD±RW)														
									Supports ThinkVantage® technologies RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>					

See footnotes for important warranty information  
 US models announced February 26 or March 18, 2008  
 US models withdrawn effective September 2008, January 2009 or May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9481-A5U	4x3	Celeron 420	1.60	512KB	Single	1GB	160GB <sup>2</sup>	DVD	GMA	Business32	3-yr		Mar 08
M57e	9481-A4U	4x3	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr		Mar 08
M57e	9481-D5U	4x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr	Gbl	Mar 08
M57e	9481-A3U	4x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr		Mar 08
M57e	9481-D6U	4x3	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr	Gbl	Mar 08
M57e	9481-A8U	4x3	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	DVD±RW	GMA	Business32	3-yr		Mar 08
M57e	9481-A9U	4x3	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr	Gbl	Mar 08

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> or <b>E2200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> or <b>E4600</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 4MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, access, open (reader/diskette)                  Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3                  Slot 4: Low Profile, 32-bit PCI 2.3</p>
Implementation			
Memory	<p><b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>		
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>		
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>		
eSATA port	<p>None</p>		
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p>		
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>None</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>220 watts with variable speed fan, manual switch</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista Business Edition (32-bit)                  ↕ Vista Basic logo</p>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<p>• Rescue and Recovery™                  • Client Security Solution™                  • ThinkVantage Productivity Center                  • Norton Internet Security™                  • Diskeeper® Home                  • PC-Doctor™ (diagnostics)                  • Picasa from Google                  • Microsoft Office 2007 Trial (60-day)                  • Sonic RecordNow and Drive Letter Access (combo, DVD±RW)                  • Corel® WinDVD® (combo, DVD, DVD±RW)</p>		
<b>Accessories</b>	<p>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984                  2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985                  1GB PC2-6400 NP DDR2 UDIMM 41U2977                  2GB PC2-6400 NP DDR2 UDIMM 41U2978                  500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                  USB 2.0 Lenovo Multimedia Headset 40Y8518                  USB 2.0 Essential Memory Key 32GB 45K1258                  USB 2.0 Ultra Secure Memory Key 8GB 45J5918                  USB 2.0 Portable Secure 320GB Hard Disk 43R2019                  ThinkVision® L2440p Wide 24" Monitor 4420HB2                  Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067                  Kensington Cable Lock from Lenovo 73P2582                  ADD2 DVI-I PCIe Connection Adapter 73P2516                  ADD2 DVI-D Monitor Connection (HDCP) 43R1985                  ATI™ Radeon™ HD 2400 Pro 128MB 43R1961                  ATI Radeon HD 2400 XT 256MB 43R1962                  NVIDIA® Quadro® 256MB NVS 290 43R1765                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
			<p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced February 19 or March 18, 2008  
 US models withdrawn effective September 2008, January 2009 or May 2009

# ThinkCentre® M57e Desktop (9481) - Vista® (June 2008) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9481-F2U	4x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	Business32	3-yr	None	Jun 08

• *This model has a 3-year limited warranty<sup>1</sup>*

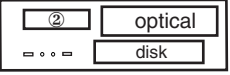
Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E7200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache		<b>Desktop</b>			
Implementation	Processor in FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>Business black color</li> <li>13.0" W X 16.2" D X 4.1" H</li> <li>331mm W X 412mm D X 104mm H</li> <li>19.4 lb (8.8 kg) in max configuration</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> </ul>	
Memory	<b>1GB std</b> , 4GB max <sup>3</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>Slot 1: Low Profile, PCI Express x16 (35w max)</li> <li>Slot 2: Low Profile, PCI Express x1</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3</li> <li>Slot 4: Low Profile, 32-bit PCI 2.3</li> </ul>			
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter					
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7					
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive					
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors					
eSATA port	None					
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar					
Diskette drive	None					
Media reader	None					
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)					
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)					
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec					
Speaker	One internal speaker for business audio					
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>					
Intel AMT	None					
Modem	None					
Security chip	None					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo					
Power supply	220 watts with variable speed fan, manual switch					
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit) ◇ Vista Basic logo		<b>Accessories</b>		Supports ThinkVantage <sup>®</sup> technologies	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery<sup>™</sup></li> <li>Client Security Solution<sup>™</sup></li> <li>ThinkVantage Productivity Center</li> <li>System Migration Assistant</li> <li>Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>Diskeeper<sup>®</sup> Home</li> <li>PC-Doctor<sup>™</sup> (diagnostics)</li> <li>Adobe<sup>®</sup> Reader</li> <li>Windows Live<sup>™</sup> Toolbar</li> <li>Windows Live Search</li> <li>Picasa from Google</li> <li>Microsoft Office 2007 Trial (60-day)</li> <li>Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD±RW)</li> </ul>		<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision<sup>®</sup> L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290 43R1765</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		RoHS-compliant	
					<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
US model announced June 24, 2008  
US model withdrawn effective May 2009

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Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
M57e	9481-JCU	4x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	Business32	Premium	None	Nov 08
M57e	9481-JDU	4x3	Pentium E5200	2.50	2MB	2	1GB	250GB	DVD±RW	GMA	Business32	Premium	None	Nov 08

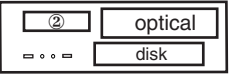
• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Pentium® Dual-Core Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache		<b>Desktop</b> 
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, open (reader/diskette) Bay ③ 3.5", 1" high, no access, std disk Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	220 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage <sup>®</sup> technologies RoHS-compliant <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision <sup>®</sup> L1700p 17" Monitor 9417HE2 ThinkVision L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290 43R1765 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b>			
• Rescue and Recovery <sup>™</sup>			
• Client Security Solution <sup>™</sup>			
• ThinkVantage Productivity Center			
• System Migration Assistant			
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)			
• Diskeeper <sup>®</sup> Home			
• PC-Doctor <sup>™</sup> (diagnostics)			
• Adobe <sup>®</sup> Reader			
• Windows Live <sup>™</sup> Toolbar			
• Windows Live Search			
• Picasa from Google			
• Microsoft Office 2007 Trial (60-day)			
• Sonic RecordNow and Drive Letter Access (DVD±RW)			
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)			

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 4.0	Preload	Vista logo	Global Educ	Avail date
M57e	9438-AJU	4x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	ES40	XP Pro	No	Sep 08	
M57e	9438-AKU	4x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	ES40	XP Pro	No	Sep 08	
M57e	9438-ALU	4x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	XP Pro	No	Sep 08	
M57e	9438-AMU	4x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD	GMA+ADD2	ES40	XP Pro	No	Sep 08	
M57e	9438-B1U	4x3	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	Bus32	Basic	No	Jun 08
M57e	9438-ANU	4x3	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	DVD±RW	GMA	ES40	Bus32	Prem	No	Sep 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p>Mainstream enterprise stability and manageability  <b>Intel® Pentium® Dual-Core Processor E2180 or E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7200 or E7300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, access, open (reader/diskette)                      Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)<sup>*</sup>                      Slot 2: Low Profile, PCI Express x1                      Slot 3: Low Profile, 32-bit PCI 2.3                      Slot 4: Low Profile, 32-bit PCI 2.3</p> <p><sup>*</sup> used in some models</p>																																												
Implementation																																															
Memory	<p><b>1GB or 2GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;                      Non-italics: standard memory in one socket; one socket available</p>																																														
Graphics	<p>All: <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector                      Some: <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express<sup>®</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant</p>																																														
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																																														
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>																																														
SATA DVD	<p>Some: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>																																														
SATA DVD±RW	<p>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																																														
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>																																														
eSATA port	<p>None</p>																																														
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>																																														
Diskette drive	<p>None</p>																																														
Media reader	<p>None</p>																																														
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus /                      ITE Tech<sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																																														
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																														
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models)</p>																																														
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>																																														
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>																																														
Audio	<p>High Definition (HD) Audio, Realtek<sup>®</sup> ALC662 codec</p>																																														
Speaker	<p>One internal speaker for business audio</p>																																														
Ethernet	<p>Gigabit ethernet on planar, Marvell<sup>®</sup> 88E8056, PCIe x1, Wake on LAN<sup>®</sup></p>																																														
Intel AMT	<p>None</p>																																														
Modem	<p>None</p>																																														
Security chip	<p>None</p>																																														
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo<sup>®</sup> logo</p>																																														
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																																														
Power supply	<p>220 watts with variable speed fan, autosensing, 80% PSU</p>																																														
<b>Preloaded operating system<sup>20</sup></b>	<p>- Some: Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA                      - Some: Microsoft Windows Vista Business Edition (32-bit)</p>																																														
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup></li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW) (XP)</li> </ul>																																														
<b>Accessories</b>	<table border="0"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ThinkVision<sup>™</sup> L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td>ThinkVision<sup>™</sup> L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290</td> <td>43R1765</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision <sup>™</sup> L2240p Wide 22" Monitor	4422HB6	ThinkVision <sup>™</sup> L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765	
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	<p>Supports ThinkVantage<sup>®</sup> technologies</p>																																														
	<p>EPEAT<sup>™</sup> Gold rating                      ENERGY STAR 4.0-compliant                      RoHS-compliant</p>																																														
	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																														


See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Desktop (6177) - ES 4.0 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 4.0	Vista preload	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
<b>M57e</b>	6177-B1U	4x3	Core 2 Duo E8400	3.00	6MB	Dual	1GB	160GB <sup>2</sup>	DVD±RW	GMA	ES40	Business32	3-yr	G P	Jul 08

• **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Desktop</b>				
Implementation											 <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>				
Memory	<b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> </ul>				
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										<ul style="list-style-type: none"> <li>Slot 1: Low Profile, PCI Express x16 (35w max)</li> <li>Slot 2: Low Profile, PCI Express x1</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3</li> <li>Slot 4: Low Profile, 32-bit PCI 2.3</li> </ul>				
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7														
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors														
eSATA port	None														
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar														
Diskette drive	None														
Media reader	None														
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)														
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®														
Intel AMT	None														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	220 watts with variable speed fan, autosenesing, 80% PSU														
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>										Supports ThinkVantage® technologies				
- Microsoft® Windows® Vista® Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984														
↕ Vista Basic logo	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985														
<b>Preloaded applications<sup>5</sup></b>	1GB PC2-6400 NP DDR2 UDIMM 41U2977														
• Rescue and Recovery™	2GB PC2-6400 NP DDR2 UDIMM 41U2978														
• Client Security Solution™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015														
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990														
• System Migration Assistant	USB Portable Diskette Drive 05K9276														
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Lenovo Multimedia Headset 40Y8518														
• Diskeeper® Home	USB 2.0 Lenovo Webcam 40Y8519														
• PC-Doctor™ (diagnostics)	USB 2.0 Essential Memory Key 32GB 45K1258														
• Adobe® Reader	USB 2.0 Ultra Secure Memory Key 4GB 45J5917														
• Windows Live™ Toolbar	USB 2.0 Ultra Secure Memory Key 8GB 45J5918														
• Windows Live Search	USB 2.0 Portable 160GB Hard Disk 43R1784														
• Picasa from Google	USB 2.0 Portable Secure 320GB Hard Disk 43R2019														
• Microsoft Office 2007 Trial (60-day)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620														
• Sonic RecordNow and Drive Letter Access (DVD±RW)	ThinkVision® L1700p 17" Monitor 9417HE2														
• Corel® WinDVD® (DVD±RW)	ThinkVision L1940p Wide 19" Monitor 4424HB6														
	ThinkVision L2240p Wide 22" Monitor 4422HB6														
	ThinkVision L2440p Wide 24" Monitor 4420HB2														
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067														
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074														
	Kensington Cable Lock from Lenovo 73P2582														
	ADD2 DVI-I PCIe Connection Adapter 73P2516														
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985														
	ATI™ Radeon™ HD 2400 Pro 128MB 43R1961														
	ATI Radeon HD 2400 XT 256MB 43R1962														
	NVIDIA® Quadro® 256MB NVS 290 43R1765														
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>														
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>														
EPEAT™ Gold rating															
ENERGY STAR 4.0-compliant															
RoHS-compliant															
<b>Limited Warranty<sup>1</sup></b>															
↕ <b>3-year parts and labor</b>															
↕ <b>International Warranty Service<sup>9</sup></b>															
↕ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>															
↕ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>															
• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)															
• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)															
• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)															
↕ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>															
↕ <b>Post warranty maintenance services available</b>															
↕ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>															

See footnotes for important warranty information  
 US model announced June 24, 2008  
 US model withdrawn effective May 2009

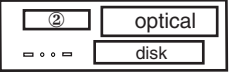
© Lenovo  
 (MONA2-7) May 2009

# ThinkCentre® M57e Desktop (7065) - GMP - withdrawn

Personal Systems Reference (PSREF)

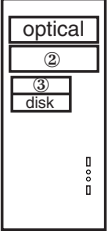
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
<b>M57e</b>	7065-AAU	4x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB <sup>2</sup>	Combo	GMA	Business32	3-yr	G P	Apr 08
<b>M57e</b>	7065-ABU	4x3	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr	G P	Apr 08
<b>M57e</b>	7065-ACU	4x3	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Combo	GMA	Business32	3-yr	G P	Apr 08

- These models are part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, access, open (reader/diskette)                  Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3                  Slot 4: Low Profile, 32-bit PCI 2.3</p>
Implementation			
Memory	<p><b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>		
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA Combo	CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	220 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista® Business Edition (32-bit)</p> <p>⇨ Vista Basic logo</p>		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo)</li> </ul>		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		

See footnotes for important warranty information  
 US models announced March 18, 2008  
 US models withdrawn effective May 2009

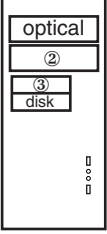


Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
<b>M57e</b>	6179-B2U	4x4	Pentium E2200	2.20	1MB	Dual	1GB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro		None	Jun 08
<b>M57e</b>	6179-B1U	4x4	Pentium E2200	2.20	1MB	Dual	2GB	160GB	None	DVD±RW	GMA	XP Pro		None	Jun 08
<b>M57e</b>	6179-B3U	4x4	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	None	DVD	GMA	XP Pro		None	Jun 08
<b>M57e</b>	6179-B4U	4x4	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	None	DVD±RW	GMA	XP Pro		None	Jun 08
<b>M57e</b>	6179-B5U	4x4	Pentium E2200	2.20	1MB	Dual	1GB	160GB	None	DVD	GMA	Business32	Prem	None	Aug 08
<b>M57e</b>	6179-B6U	4x4	Pentium E2200	2.20	1MB	Dual	2GB	160GB	None	DVD±RW	GMA	Business32	Prem	None	Aug 08
<ul style="list-style-type: none"> <li>• <b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> </ul>															
Positioning	<b>Stability and manageability for small and medium businesses</b> <b>Intel® Pentium® Dual-Core Processor E2200 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E7200 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket									<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket									Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk					
Memory	<b>1GB or 2GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available									Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter														
SATA disk	<b>160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</b> Serial ATA, SATA 3.0Gb/s, integrated in ICH7 <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar														
SATA controller	None														
SATA DVD	None														
SATA DVD±RW	None														
SATA cables	None														
eSATA port	None														
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar														
Diskette drive	None														
Media reader	None														
Chipset	<b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions											<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                              - Padlock loop (in rear for opt padlock)                              - Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)														
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>														
Intel AMT	None														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, manual switch														
<b>Preloaded operating system<sup>20</sup></b> - <i>Some:</i> Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA - <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)			<b>Accessories</b> 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision <sup>®</sup> L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290 43R1765 NVIDIA Quadro 256MB FX 370 43R1766 NVIDIA Quadro 512MB FX 1700 43R1767 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			Supports ThinkVantage <sup>®</sup> technologies  RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus <sup>™</sup> part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>									

See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
<b>M57e</b>	6179-BBU	4x4	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro	Premium	None	Nov 08
<b>M57e</b>	6179-BCU	4x4	Pentium E5200	2.50	2MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	Premium	None	Nov 08
<b>M57e</b>	6179-BFU	4x4	Core 2 Duo E7300	2.66	3MB	2	1GB	160GB	None	DVD	GMA	XP Pro	Premium	None	Nov 08
<b>M57e</b>	6179-BDU	4x4	Core 2 Duo E7300	2.66	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	Premium	None	Nov 08

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning	<b>Stability and manageability for small and medium businesses</b>										<b>Tower</b>																																																	
Processor	<b>Intel® Pentium® Dual-Core Processor E5200 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																																	
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Memory	<b>1GB or 2GB std,</b> 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																																																	
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SATA disk	<b>160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																																																											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																																																											
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive																																																											
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																																																											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors																																																											
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Chipset	<b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions																																																											
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Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo										Supports ThinkVantage <sup>®</sup> technologies																																																	
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Power supply	280 watts with variable speed fan, manual switch										RoHS-compliant																																																	
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA ⇨ Disk-to-Disk Recovery (in hidden protected area)										<b>Accessories</b> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td><td>41N5618</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision<sup>™</sup> L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ADD2 DVI-I PCIe Connection Adapter</td><td>73P2516</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> <tr><td>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB FX 370</td><td>43R1766</td></tr> <tr><td>NVIDIA Quadro 512MB FX 1700</td><td>43R1767</td></tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision <sup>™</sup> L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767
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NVIDIA Quadro 256MB FX 370	43R1766																																																											
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<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW)</li> </ul>										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇨ <b>3-year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇨ <b>Post warranty maintenance services available</b></li> <li>⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																	

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9439-B8U	4x5	Pentium E2160	1.80	1MB	Dual	1GB	160GB <sup>2</sup>	Bay	Combo	GMA	XP Pro	3-yr	None	Mar 08
M57e	9439-B9U	4x5	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Bay	Combo	GMA	XP Pro	3-yr	None	Mar 08
M57e	9439-BAU	4x5	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	Bay	Combo	GMA	XP Pro	3-yr	None	Mar 08
M57e	9439-A2U	4x5	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Bay	Combo	GMA	XP Pro	3-yr	None	Mar 08

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Pentium® Dual-Core Processor E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 4MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																													
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk                  Bay ⑤ 3.5", 1" high, no access, opt disk</p>																																													
Memory	<p><b>1GB std, 4GB max<sup>6</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																																													
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>																																															
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																																															
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>																																															
SATA Combo	<p>CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>																																															
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>																																															
eSATA port	<p>None</p>																																															
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>																																															
Diskette drive	<p>None</p>																																															
Media reader	<p>None</p>																																															
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express<sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech<sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																																															
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																															
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p>																																															
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>																																															
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>																																															
Audio	<p>High Definition (HD) Audio, Realtek<sup>®</sup> ALC662 codec</p>																																															
Speaker	<p>One internal speaker for business audio</p>																																															
Ethernet	<p>Gigabit ethernet on planar, Marvell<sup>®</sup> 88E8056, PCIe x1, Wake on LAN<sup>®</sup></p>																																															
Intel AMT	<p>None</p>																																															
Modem	<p>None</p>																																															
Security chip	<p>None</p>																																															
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo<sup>®</sup> logo</p>																																															
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																																															
Power supply	<p>280 watts with variable speed fan, manual switch</p>																																															
	<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</li> <li>↕ Disk-to-Disk Recovery (in hidden protected area)</li> </ul> <p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup></li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (combo)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (combo)</li> </ul>	<p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision<sup>®</sup> L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ADD2 DVI-I PCIe Connection Adapter</td><td>73P2516</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> <tr><td>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB FX 370</td><td>43R1766</td></tr> <tr><td>NVIDIA Quadro 512MB FX 1700</td><td>43R1767</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision <sup>®</sup> L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767		
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			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																																													
			<p>Supports ThinkVantage<sup>®</sup> technologies</p>																																													
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			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																													

See footnotes for important warranty information  
 US models announced February 26 or March 18, 2008  
 US models withdrawn effective September 2008, January 2009, or May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
M57e	9439-EBU	4x5	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	Bay	DVD	GMA+ADD2	XP Pro	None	Aug 08
M57e	9439-E5U	4x5	Pentium E2200	2.20	1MB	Dual	1GB	160GB	Bay	DVD	GMA	XP Pro	None	Aug 08
M57e	9439-E6U	4x5	Pentium E2200	2.20	1MB	Dual	2GB	160GB	Bay	DVD±RW	GMA	XP Pro	None	Aug 08
M57e	9439-E7U	4x5	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	Bay	DVD±RW	GMA	XP Pro	None	Aug 08
M57e	9439-E9U	4x5	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	Bay	DVD	GMA+ADD2	XP Pro	None	Aug 08
M57e	9439-E8U	4x5	Core 2 Duo E7300	2.66	3MB	Dual	2GB	160GB	Bay	DVD±RW	GMA	XP Pro	None	Aug 08

• **These models have a 3-year limited warranty<sup>1</sup>**

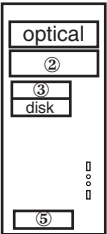
Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Pentium® Dual-Core Processor E2180 or E2200 with dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7200 or E7300 with dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																												
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk                      Bay ⑤ 3.5", 1" high, no access, opt disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)<sup>*</sup>                      Slot 2: half-length, full-height, PCI Express x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p> <p><sup>*</sup> used in some models</p>																																												
Memory	<p><b>1GB or 2GB std</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; one socket available</p>																																														
Graphics	<p><i>All</i>: <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector  <i>Some</i>: <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express<sup>®</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p>																																												
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																																														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		<p>RoHS-compliant</p>																																												
SATA DVD	<p><i>Some</i>: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive  <i>Some</i>: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																																														
SATA DVD±RW	<p><i>Some</i>: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																												
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			<p>Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																																											
eSATA port	None																																														
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar		<p>Mouse Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																																												
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Media reader	None		<p>Power supply 280 watts with variable speed fan, manual switch</p>																																												
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																																														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<p>Preloaded operating system<sup>20</sup></p> <ul style="list-style-type: none"> <li>- Microsoft® Windows® XP Professional with Vista® COA</li> <li>↪ Disk-to-Disk Recovery (in hidden protected area)</li> </ul> <p>Preloaded applications<sup>5</sup></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW)</li> </ul>																																												
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models)																																														
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		<p>Accessories</p> <table border="0"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>ThinkVision® L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI™ Radeon™ HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 2600 XT 512MB</td> <td>43R1963</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td>NVIDIA Quadro 256MB FX 370</td> <td>43R1766</td> </tr> <tr> <td>NVIDIA Quadro 512MB FX 1700</td> <td>43R1767</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ThinkVision® L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767
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NVIDIA Quadro 256MB FX 370	43R1766																																														
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Audio	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																														
Speaker	One internal speaker for business audio																																														
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®																																														
Intel AMT	None																																														
Modem	None																																														
Security chip	None																																														

See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Tower (9439) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57e</b>	9439-B1U	4x5	Celeron 420	1.60	512KB	Single	1GB	160GB <sup>2</sup>	Bay	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-AAU	4x4	Celeron 430	1.80	512KB	Single	1GB	80GB		DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ABU	4x4	Pentium E2160	1.80	1MB	Dual	1GB	80GB		DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-AQU	4x5	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Bay	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-APU	4x5	Pentium E2160	1.80	1MB	Dual	1GB	160GB	Bay	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ACU	4x4	Core 2 Duo E4500	2.20	2MB	Dual	1GB	80GB		DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ARU	4x5	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Bay	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ASU	4x5	Core 2 Duo E4500	2.20	2MB	Dual	1GB	160GB	Bay	Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-AUU	4x5	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	Bay	DVD	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ADU	4x4	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB		Combo	GMA	Bus32	3-yr	None	Mar 08
<b>M57e</b>	9439-ATU	4x5	Core 2 Duo E6550	2.33	4MB	Dual	1GB	160GB	Bay	Combo	GMA	Bus32	3-yr	None	Mar 08

Positioning	<i>Mainstream enterprise stability and manageability</i>																																																				
Processor	<b>Intel® Celeron® Processor 420 or 430</b> with single-core, Intel 64 Technology, EDBit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket																																																				
Implementation	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2 lb (11.0 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul> 																																																				
Memory	<b>1GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available																																																				
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter																																																				
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening																																																				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																																																				
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive																																																				
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive																																																				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar																																																				
eSATA port	None																																																				
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar																																																				
Diskette drive	None																																																				
Media reader	None																																																				
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions																																																				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																				
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																																																				
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)																																																				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																																				
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec																																																				
Speaker	One internal speaker for business audio																																																				
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>																																																				
Intel AMT	None																																																				
Modem	None																																																				
Security chip	None																																																				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo																																																				
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																				
Power supply	280 watts with variable speed fan, manual switch																																																				
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Microsoft® Windows® Vista Business Edition (32-bit)</td> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>◇ Vista Basic logo</td> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td></td> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td></td> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td></td> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td></td> <td>ThinkVision® L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td></td> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td></td> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td></td> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td></td> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td></td> <td>ATI™ Radeon™ HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td></td> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td></td> <td>ATI Radeon HD 2600 XT 512MB</td> <td>43R1963</td> </tr> <tr> <td></td> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td></td> <td>NVIDIA Quadro 256MB FX 370</td> <td>43R1766</td> </tr> <tr> <td></td> <td>NVIDIA Quadro 512MB FX 1700</td> <td>43R1767</td> </tr> </table> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		- Microsoft® Windows® Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	◇ Vista Basic logo	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985		1GB PC2-6400 NP DDR2 UDIMM	41U2977		2GB PC2-6400 NP DDR2 UDIMM	41U2978		USB 2.0 Lenovo Multimedia Headset	40Y8518		USB 2.0 Ultra Secure Memory Key 8GB	45J5918		ThinkVision® L2440p Wide 24" Monitor	4420HB2		Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		Kensington Cable Lock from Lenovo	73P2582		ADD2 DVI-I PCIe Connection Adapter	73P2516		ADD2 DVI-D Monitor Connection (HDCP)	43R1985		ATI™ Radeon™ HD 2400 Pro 128MB	43R1961		ATI Radeon HD 2400 XT 256MB	43R1962		ATI Radeon HD 2600 XT 512MB	43R1963		NVIDIA® Quadro® 256MB NVS 290	43R1765		NVIDIA Quadro 256MB FX 370	43R1766		NVIDIA Quadro 512MB FX 1700	43R1767
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	NVIDIA Quadro 256MB FX 370	43R1766																																																			
	NVIDIA Quadro 512MB FX 1700	43R1767																																																			
	<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>USB port disablement</li> </ul>																																																				
	Supports ThinkVantage <sup>®</sup> technologies																																																				
	RoHS-compliant																																																				
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations)<sup>7</sup>:             <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																																				

See footnotes for important warranty information  
 US models announced February 19, 2008  
 US models withdrawn effective September 2008, January 2009, or May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
M57e	9439-AWU	4x5	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	Bay	DVD±RW	GMA	Bus32	Basic		Aug 08
M57e	9439-DGU	4x4	Pentium E2200	2.20	1MB	Dual	1GB	160GB		Combo	GMA	Bus32	Basic	Gbl	Mar 08
M57e	9439-DHU	4x4	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB		Combo	GMA+ADD2	Bus32	Basic	Gbl	Mar 08
M57e	9439-A3U	4x5	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	Bay	Combo	GMA	Bus32	Basic		Mar 08
M57e	9439-DJU	4x4	Core 2 Duo E8400	3.00	6MB	Dual	2GB	250GB		DVD±RW	GMA+ADD2	Bus32	Premium	Gbl	Mar 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2180 or E2200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 or E8400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																							
Implementation											<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p> <p>Bay ⑤ 3.5", 1" high, no access, opt disk**</p>																																							
Memory	<p><b>1GB or 2GB</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available</p>										<p>** 2nd Disk Bay is only available on some models</p>																																							
Graphics	<p><i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector</p> <p><i>Some:</i> <b>ADD2 DVI-I PCIe Connection Adapter</b>, PCI Express<sup>®</sup> adapter in PCIe x16 slot, provides DVI-I connector to support second monitor, no DVI-to-VGA dongle</p>										<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)*</p> <p>Slot 2: half-length, full-height, PCI Express x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																																							
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																																							
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>										<p>Supports ThinkVantage® technologies</p>																																							
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>										<p>RoHS-compliant</p>																																							
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>										<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																							
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>																																																	
eSATA port	<p>None</p>																																																	
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>																																																	
Diskette drive	<p>None</p>																																																	
Media reader	<p>None</p>																																																	
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																																																	
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																																	
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Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>																																																	
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>																																																	
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>																																																	
Speaker	<p>One internal speaker for business audio</p>																																																	
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®</p>																																																	
Intel AMT	<p>None</p>																																																	
Modem	<p>None</p>																																																	
Security chip	<p>None</p>																																																	
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																																																	
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																																																	
Power supply	<p>280 watts with variable speed fan, manual switch</p>																																																	
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista Business Edition (32-bit)</p>																																																	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD±RW)</li> </ul>										<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>ThinkVision® L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI™ Radeon™ HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 2600 XT 512MB</td> <td>43R1963</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td>NVIDIA Quadro 256MB FX 370</td> <td>43R1766</td> </tr> <tr> <td>NVIDIA Quadro 512MB FX 1700</td> <td>43R1767</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	ThinkVision® L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767
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See footnotes for important warranty information  
 US models announced March 18 or August 19, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57e</b>	9439-D6U	4x4	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB <sup>2</sup>	None	DVD±RW	GMA	Bus32	3-yr	None	Jun 08

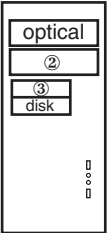
• *This model has a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache										<b>Tower</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors											
eSATA port	None											
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)											
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit) ◇ Vista Basic logo											Supports ThinkVantage <sup>®</sup> technologies
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD±RW)</li> </ul>											RoHS-compliant
<b>Accessories</b>	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision <sup>®</sup> L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290 43R1765 NVIDIA Quadro 256MB FX 370 43R1766 NVIDIA Quadro 512MB FX 1700 43R1767 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US model announced June 24, 2008  
 US model withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
<b>M57e</b>	9439-F1U	4x4	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	Bus32	Prem	None	Nov 08
<b>M57e</b>	9439-F2U	4x4	Pentium E5200	2.50	2MB	2	1GB	250GB	None	DVD±RW	GMA	Bus32	Prem	None	Nov 08

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Dual-Core Processor E5200</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage <sup>®</sup> technologies  RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus <sup>™</sup> part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
• Rescue and Recovery <sup>™</sup>	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
• Client Security Solution <sup>™</sup>	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
• ThinkVantage Productivity Center	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
• System Migration Assistant	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)	USB Portable Diskette Drive	05K9276	
• Diskeeper <sup>®</sup> Home	USB 2.0 Lenovo Multimedia Headset	40Y8518	
• PC-Doctor <sup>™</sup> (diagnostics)	USB 2.0 Lenovo Webcam	40Y8519	
• Adobe <sup>®</sup> Reader	USB 2.0 Essential Memory Key 32GB	45K1258	
• Windows Live <sup>™</sup> Toolbar	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	
• Windows Live Search	USB 2.0 Portable 160GB Hard Disk	43R1784	
• Picasa from Google	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	
• Microsoft Office 2007 Trial (60-day)	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
• Sonic RecordNow and Drive Letter Access (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)	ThinkVision <sup>®</sup> L1940p Wide 19" Monitor	4424HB6	
	ThinkVision L2240p Wide 22" Monitor	4422HB6	
	ThinkVision L2440p Wide 24" Monitor	4420HB2	
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
	Kensington Cable Lock from Lenovo	73P2582	
	ADD2 DVI-I PCIe Connection Adapter	73P2516	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	
	ATI Radeon HD 2400 XT 256MB	43R1962	
	ATI Radeon HD 2600 XT 512MB	43R1963	
	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765	
	NVIDIA Quadro 256MB FX 370	43R1766	
	NVIDIA Quadro 512MB FX 1700	43R1767	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 4.0	Vista preload	Vista logo	Global Educ	Avail date
M57e	9356-ADU	4x4	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB <sup>2</sup>	None	Combo	GMA	ES40	Bus32	Basic	Gbl	Mar 08
M57e	9356-AFU	4x4	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	None	Combo	GMA+ADD2	ES40	Bus32	Basic	Gbl	Mar 08
M57e	9356-AEU	4x4	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	None	Combo	GMA	ES40	Bus32	Basic	Gbl	Mar 08
M57e	9356-AGU	4x4	Core 2 Duo E8400	3.00	6MB	Dual	2GB	250GB	None	DVD±RW	GMA+ADD2	ES40	Bus32	Prem	Gbl	Mar 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Core™ 2 Duo Processor E4600 with dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 or E8400 with dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																										
Implementation Memory	<p><b>1GB or 2GB std</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Italics:</i> standard memory in both sockets; no sockets avail;  <i>Non-italics:</i> standard memory in one socket; one socket available</p>		<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk</p>																																										
Graphics	<p><i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector  <i>Some:</i> <b>ADD2 DVI-I PCIe Connection Adapter</b>, PCI Express<sup>®</sup> adapter in PCIe x16 slot, provides DVI-I connector to support second monitor, no DVI-to-VGA dongle</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)<sup>*</sup>                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																																										
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>																																												
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>																																												
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>																																												
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																																												
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>																																												
eSATA port	<p>None</p>																																												
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>																																												
Diskette drive	<p>None</p>																																												
Media reader	<p>None</p>																																												
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus /                  ITE Tech<sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>																																												
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																												
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-I in some models)</p>																																												
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>																																												
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>																																												
Audio	<p>High Definition (HD) Audio, Realtek<sup>®</sup> ALC662 codec</p>																																												
Speaker	<p>One internal speaker for business audio</p>																																												
Ethernet	<p>Gigabit ethernet on planar, Marvell<sup>®</sup> 88E8056, PCIe x1, Wake on LAN<sup>®</sup></p>																																												
Intel AMT	<p>None</p>																																												
Modem	<p>None</p>																																												
Security chip	<p>None</p>																																												
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo<sup>®</sup> logo</p>																																												
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																																												
Power supply	<p>280 watts with variable speed fan, autosensing, 80% PSU</p>																																												
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft<sup>®</sup> Windows<sup>®</sup> Vista<sup>®</sup> Business Edition (32-bit)</p>																																												
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (combo, DVD±RW)</li> </ul>																																												
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See footnotes for important warranty information  
 US models announced March 18, 2008  
 US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>o</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 4.0	Preload	Vista logo	Global Educ	Avail date
M57e	9356-B5U	4x5	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB <sup>2</sup>	Bay	DVD	GMA	ES40	XP Pro	No	No	Sep 08
M57e	9356-B1U	4x4	Core 2 Duo E7200	2.53	3MB	Dual	1GB	160GB	Bay	DVD±RW	GMA	ES40	Bus32	Basic	No	Jun 08
M57e	9356-B7U	4x5	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	Bay	DVD±RW	GMA	ES40	Bus32	Prem	No	Sep 08

• These models have a 3-year limited warranty<sup>1</sup>

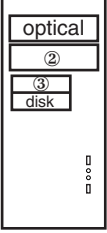
Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E7200 or E7300 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Tower</b>		
Implementation	Processor in FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk*		
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										* 2nd Disk Bay is only available on some models  Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7												
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive												
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors												
eSATA port	None												
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions												Supports ThinkVantage <sup>®</sup> technologies  EPEAT™ Gold rating ENERGY STAR 4.0-compliant RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)												
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, 80% PSU												
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>												
- <i>Some:</i> Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984												
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985												
	1GB PC2-6400 NP DDR2 UDIMM 41U2977												
	2GB PC2-6400 NP DDR2 UDIMM 41U2978												
	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015												
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990												
	USB Portable Diskette Drive 05K9276												
	USB 2.0 Lenovo Multimedia Headset 40Y8518												
	USB 2.0 Lenovo Webcam 40Y8519												
	USB 2.0 Essential Memory Key 32GB 45K1258												
	USB 2.0 Ultra Secure Memory Key 8GB 45J5918												
	USB 2.0 Portable 160GB Hard Disk 43R1784												
	USB 2.0 Portable Secure 320GB Hard Disk 43R2019												
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618												
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620												
	ThinkVision <sup>®</sup> L1940p Wide 19" Monitor 4424HB6												
	ThinkVision L2240p Wide 22" Monitor 4422HB6												
	ThinkVision L2440p Wide 24" Monitor 4420HB2												
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067												
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	ADD2 DVI-I PCIe Connection Adapter 73P2516												
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	ATI™ Radeon™ HD 2400 Pro 128MB 43R1961												
	ATI Radeon HD 2400 XT 256MB 43R1962												
	ATI Radeon HD 2600 XT 512MB 43R1963												
	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290 43R1765												
	NVIDIA Quadro 256MB FX 370 43R1766												
	NVIDIA Quadro 512MB FX 1700 43R1767												
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>												
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												

See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® M57e Tower (6176) - ENERGY STAR® 4.0 (GMP) - withdrawn Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 4.0	Vista preload	Global (G) GMP (P)	Avail date
M57e	6176-B1U	4x4	Core 2 Duo E8400	3.00	6MB	Dual	1GB	160GB <sup>2</sup>	None	DVD±RW	GMA	ES40	Business32	G P	Jul 08

• This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Tower</b>																																																										
Implementation											<ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2 lb (11.0 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>																																																										
Memory	<b>1GB std</b> , 4GB max <sup>9</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>																																																										
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, PCI Express x16 (75w max)</li> <li>Slot 2: half-length, full-height, PCI Express x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>																																																										
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>USB port disablement</li> </ul>																																																										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																																																																				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																																																																				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors																																																																				
eSATA port	None																																																																				
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector																																																																				
Diskette drive	None																																																																				
Media reader	None																																																																				
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions																																																																				
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Power supply	280 watts with variable speed fan, autosensing, 80% PSU																																																																				
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>Microsoft® Windows® Vista® Business Edition (32-bit)</li> <li>↔ Vista Basic logo</li> </ul>										<p align="center"><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 4GB</td><td>45J5917</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ADD2 DVI-I PCIe Connection Adapter</td><td>73P2516</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI™ Radeon™ HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> <tr><td>NVIDIA® Quadro® 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB FX 370</td><td>43R1766</td></tr> <tr><td>NVIDIA Quadro 512MB FX 1700</td><td>43R1767</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767
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<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>System Migration Assistant</li> <li>Norton Internet Security™ (90 days of virus definitions)</li> <li>Diskeeper® Home</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Windows Live™ Toolbar</li> <li>Windows Live Search</li> <li>Picasa from Google</li> <li>Microsoft Office 2007 Trial (60-day)</li> <li>Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>Corel® WinDVD® (DVD±RW)</li> </ul>																																																																				
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<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																																					

See footnotes for important warranty information  
US model announced June 24, 2008  
US model withdrawn effective May 2009

# ThinkCentre® M57e Tower (7064) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
<b>M57e</b>	7064-AAU	4x4	Pentium E2200	2.20	1MB	Dual	1GB	160GB <sup>2</sup>	None	Combo	GMA	Business32	3-yr	G P	Apr 08

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Dual-Core Processor E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 1MB shared L2 cache										
Implementation	Processor in FC-LGA6 package in LGA775 socket										
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                      Slot 2: half-length, full-height, PCI Express x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7										
SATA Combo	CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors										
eSATA port	None										
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>9</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)										
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, manual switch										
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Microsoft<sup>®</sup> Windows<sup>®</sup> Vista<sup>®</sup> Business Edition (32-bit)</li> <li>✦ Vista Basic logo</li> </ul>										
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup> (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live<sup>™</sup> Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (combo)</li> </ul>										
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision<sup>®</sup> L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI<sup>™</sup> Radeon<sup>™</sup> HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 2600 XT 512MB 43R1963</li> <li>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 43R1766</li> <li>NVIDIA Quadro 512MB FX 1700 43R1767</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>										
	Supports ThinkVantage <sup>®</sup> technologies										
	RoHS-compliant										
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇨ <b>3-year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus<sup>™</sup> part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇨ <b>Post warranty maintenance services available</b></li> <li>⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>										

See footnotes for important warranty information  
 US model announced March 18, 2008  
 US model withdrawn effective May 2009

Partial list of accessories supported on ThinkCentre M57e

**Memory**

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	ann 06/28/05
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	ann 06/28/05
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	ann 09/26/06
512MB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2976	ann 09/26/06
1GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2977	ann 09/26/06
2GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2978	ann 01/08/08

<sup>48</sup> When PC2-6400 is installed with systems that have PC2-5300 memory, PC2-6400 will operate at the PC2-5300 memory speed.

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

**Storage and removable storage**

80GB SATA 3.0Gb/s Disk (7200 rpm)	09N4253	ann 05/19/03
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	ann 05/19/03
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07

USB Portable Diskette Drive	05K9276	ann 06/05/00
USB 2.0 Essential Memory Key 1GB	41U4940	ann 01/23/07
USB 2.0 Essential Memory Key 2GB	41U4944	ann 01/23/07
USB 2.0 Essential Memory Key 4GB	45J7904	ann 06/24/08
USB 2.0 Essential Memory Key 8GB	45J7905	ann 07/15/08
USB 2.0 Essential Memory Key 32GB	45K1258	ann 10/28/08
USB 2.0 Security Memory Key 1GB	41U5118	ann 07/17/07
USB 2.0 Security Memory Key 2GB	41U5119	ann 07/17/07
USB 2.0 Security Memory Key 4GB	41U5120	ann 07/17/07
USB 2.0 Ultra Secure Memory Key 1GB	45J5915	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 2GB	45J5916	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 4GB	45J5917	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 8GB	45J5918	ann 08/26/08
USB 2.0 Portable 160GB Hard Disk	43R1784	ann 09/23/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	ann 01/05/06
USB 2.0 Super Multi-Burner Drive	41N5565	ann 01/23/07

**Graphics**

*Small 6305/9482/9487/6178/7066 support Low Profile 35 watts max:*

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ann 11/06/07
ATI Radeon HD 2400 XT 256MB	43R1962	ann 11/06/07

*Desktop 9481/9438/6177/7065 support Low Profile 35 watts max:*

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
ATI Radeon HD 2400 Pro 128MB	43R1961	ann 11/06/07
ATI Radeon HD 2400 XT 256MB	43R1962	ann 11/06/07
NVIDIA® Quadro® 256MB NVS 290	43R1765	ann 12/18/07

*Tower 6179/9439/9356/6176/7064 support 75 watts max:*

ADD2 DVI-I PCIe Connection Adapter	73P2516	ann 06/28/05
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
ATI Radeon HD 2400 Pro 128MB	43R1961	ann 11/06/07
ATI Radeon HD 2400 XT 256MB	43R1962	ann 11/06/07
ATI Radeon HD 2600 XT 512MB	43R1963	ann 11/06/07
NVIDIA Quadro 256MB NVS 290	43R1765	ann 12/18/07
NVIDIA Quadro 256MB FX 370	43R1766	ann 12/18/07
NVIDIA Quadro 512MB FX 1700	43R1767	ann 12/18/07

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	ann 12/07/04
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Optical Wheel Mouse (USB)	06P4069	ann 05/21/03
Optical ScrollPoint® Mouse (USB, PS/2)	31P7405	ann 08/27/02
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse (blk, via USB)	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse (red, via USB)	51J0198	ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

USB 2.0 Lenovo Multimedia Headset	40Y8518	ann 06/27/06
USB 2.0 Lenovo Webcam	40Y8519	ann 08/29/06

**Security**

Kensington® Cable Lock from Lenovo	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

**Monitors**

ThinkVision® L174 17" Monitor	9227AE1	ann 04/15/08
ThinkVision L1700p 17" Monitor	9417HE2	ann 09/17/08
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1940p Wide 19" Monitor	4424HB6	ann 09/17/08
ThinkVision L200p Wide 20.1" Monitor	4438HB6	ann 04/15/08
ThinkVision L2240p Wide 22" Monitor	4422HB6	ann 09/17/08
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08
ThinkVision L2440x Wide 24" Monitor	4421HB2	ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington Cable Lock from Lenovo	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Radial Arm	19K4464	ann 05/05/00

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

**Medialess License Key (MLK)**

Microsoft® Office 2007 Basic, English	43R1528	ann 01/31/07
Microsoft Office 2007 Small Business, Engl	43R1534	ann 01/31/07
Microsoft Office 2007 Professional, English	43R1531	ann 01/31/07

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57e	9481-J1U	4x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	3-yr	None	Aug 08
M57e	9481-J2U	4x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB	DVD±RW	GMA+ADD2	XP Pro	3-yr	None	Aug 08
M57e	9481-J3U	4x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	DVD	GMA	XP Pro	3-yr	None	Aug 08
M57e	9481-J4U	4x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro	3-yr	None	Aug 08
M57e	9481-J6U	4x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD	GMA	XP Pro	3-yr	None	Aug 08
M57e	9481-J5U	4x3	Core 2 Duo E7200	2.53	3MB	Dual	2GB	160GB	DVD±RW	GMA+ADD2	XP Pro	3-yr	None	Aug 08
M57e	9481-J7U	4x3	Core 2 Duo E7300	2.66	3MB	Dual	1GB	160GB	DVD±RW	GMA	XP Pro	3-yr	None	Aug 08

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2180 or E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or</p> <p><b>Intel Core™ 2 Duo Processor E7200 or E7300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB L2 cache</p> <p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Desktop</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4 lb (8.8 kg) in max configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, access, open (reader/diskette)                  Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)*                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3                  Slot 4: Low Profile, 32-bit PCI 2.3</p> <p>* used in some models</p>
Memory	<p><b>1GB or 2GB std</b>, 4GB max<sup>a</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;</p> <p><i>Non-italics:</i> standard memory in one socket; one socket available</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Graphics	<p><i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector</p> <p><i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express<sup>a</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant</p>		<p>Supports ThinkVantage® technologies</p>
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		<p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>		
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>		
eSATA port	<p>None</p>		
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus /</p> <p>ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models)</p>		
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN<sup>6</sup></p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>None</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>220 watts with variable speed fan, manual switch</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		
- Microsoft® Windows® XP Professional with Vista® COA	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
◇ Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	USB 2.0 Lenovo Multimedia Headset	40Y8518	
	USB 2.0 Lenovo Webcam	40Y8519	
	USB 2.0 Essential Memory Key 32GB	45K1258	
	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	
	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	ThinkVision® L2240p Wide 22" Monitor	4422HB6	
	ThinkVision L2440p Wide 24" Monitor	4420HB2	
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
	Kensington Cable Lock from Lenovo	73P2582	
	ADD2 DVI-I PCIe Connection Adapter	73P2516	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	
	ATI Radeon HD 2400 XT 256MB	43R1962	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective May 2009



Lenovo ThinkCentre M57  
with Lenovo widescreen monitor



Lenovo ThinkCentre M57p  
with ThinkVision L190x monitor



Lenovo ThinkCentre M57



Lenovo ThinkCentre M57p



Lenovo ThinkCentre M57  
and ThinkVision monitor on  
Lenovo Vertical PC and Monitor Stand (41R4359)




Lenovo ThinkCentre M57p  
and ThinkVision monitor on  
Lenovo Vertical PC and Monitor Stand (41R4359)

# ThinkCentre® M57 Eco Ultra Small (6395) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Intel vPro	Serial port	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6395-61U	0x2	Celeron 440	2.00	512KB	1GB	160GB <sup>2</sup>	DVD	GMA	DVI-D	None		Business32	3-yr		Jun 08
M57	6395-62U	0x2	Pentium E2160	1.80	1MB	1GB	160GB	DVD	GMA	DVI-D	None		Business32	3-yr	Educ	Jun 08
M57	6395-17U	0x2	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	DVI-D	None		Business32	3-yr		Feb 08
M57	6395-23U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	None		Business32	3-yr	Gbl	Feb 08
M57	6395-24U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	None	Serial	Business32	3-yr		Feb 08

- **Only 4.5 liter volume (25% less than the 6.3 liter ThinkCentre M57 Ultra Small)**
- **Best acoustic and lowest power consumption of all Lenovo desktops**

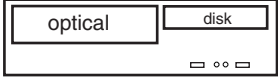
Positioning Processor	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i></p> <p><b>Intel® Celeron® Processor 440</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>	<p><b>Eco Ultra Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk</p> <p>Slots: None</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3 to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Steel chassis supports 110 lb (50kg) monitor on top</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>																																								
Implementation		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> <li>• Some: Serial port disablement</li> </ul>																																								
Memory	<p><b>1GB</b> or <b>2GB</b> std, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Non-italics: standard memory in one socket; one socket available</i></p>	<p>Supports ThinkVantage® technologies</p>																																								
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, supports dual independent display</p>	<p>EPEAT™ Gold rating ENERGY STAR® 4.0-compliant GREENGUARD® certified RoHS-compliant</p>																																								
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																								
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9																																									
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)																																									
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)																																									
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																																									
eSATA port	None																																									
EIDE controller	None																																									
Diskette drive	None																																									
Media reader	None																																									
Chipset	<p><b>Intel Q35 Express Chipset;</b> I/O Controller Hub 9 (ICH9) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for [serial], hardware monitoring (temperature, voltage, fan speed)</p>																																									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																									
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DVI-D), Some: serial (9-pin)																																									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																									
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																																									
Speaker	One internal speaker for business audio																																									
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY/MAC), PCIe x1, ASF 2.0																																									
Intel AMT	None																																									
Modem	None																																									
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo																																									
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																																									
Power supply	External AC/DC adapter, 120 watts, autosensing, 85% PSU																																									
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista® Business Edition (32-bit)</p> <p>↪ Vista Basic logo</p>																																									
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Some: Education software</li> <li>- VitalSource Library College Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Digital School Collection</li> <li>- Photoshop Elements 6 (and CD)</li> <li>- Premier Elements 4 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-5300 DDR2 SODIMM (notebook)</td> <td>43R1763</td> </tr> <tr> <td>2GB PC2-5300 DDR2 SODIMM (notebook)</td> <td>43R1756</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>USB 2.0 Super Multi-Burner Drive</td> <td>41N5565</td> </tr> <tr> <td>ThinkVision® L1940p Wide 19" Monitor</td> <td>4424HB6</td> </tr> <tr> <td>ThinkVision L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>ThinkCentre Ultra Small Under Desk Mount</td> <td>40Y8625</td> </tr> <tr> <td>Lenovo Vertical PC and Monitor Stand</td> <td>41R4359</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>USB Travel Keyboard with UltraNav™</td> <td>31P9490</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> </table> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 DDR2 SODIMM (notebook)	43R1763	2GB PC2-5300 DDR2 SODIMM (notebook)	43R1756	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	USB 2.0 Super Multi-Burner Drive	41N5565	ThinkVision® L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	ThinkCentre Ultra Small Under Desk Mount	40Y8625	Lenovo Vertical PC and Monitor Stand	41R4359	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	USB Travel Keyboard with UltraNav™	31P9490	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582
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See footnotes for important warranty information  
US models announced February 12 or May 20, 2008  
US models withdrawn effective January 2009



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Intel vPro	Card slot	Serial port	Preload	Global Educ	Avail date
M57	6395-84U	0x2	Pentium E2200	2.20	1MB	1GB	160GB <sup>2</sup>	DVD	GMA	DVI-D	None		Serial	XP Pro	None	Sep 08
M57	6395-85U	0x2	Pentium E2200	2.20	1MB	2GB	250GB	DVD±RW	GMA	DVI-D	None	/54		XP Pro	None	Sep 08
M57	6395-82U	0x2	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD	GMA	DVI-D	None		Serial	XP Pro	None	Sep 08
M57	6395-83U	0x2	Core 2 Duo E7200	2.53	3MB	2GB	250GB	DVD±RW	GMA	DVI-D	None	/54		XP Pro	None	Sep 08
M57	6395-88U	0x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB	DVD	GMA	DVI-D	None		Serial	XP Pro	None	Sep 08
M57	6395-89U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	None	/54		XP Pro	None	Sep 08
M57	6395-86U	0x2	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	DVI-D	None		Serial	XP Pro	None	Sep 08
M57	6395-87U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	None	/54		XP Pro	None	Sep 08

- Only 4.5 liter volume (25% less than the 6.3 liter ThinkCentre M57 Ultra Small)
- Best acoustic and lowest power consumption of all Lenovo desktops
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate enterprise stability for large enterprise and mid-market <b>Intel® Pentium® Dual-Core Processor E2200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E7200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> or <b>E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Eco Ultra Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>1GB</b> or <b>2GB</b> std, 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3. to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Steel chassis supports 110 lb (50kg) monitor on top</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, supports dual independent display	<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Serial port disablement</li> </ul>
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH9	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q35 Express Chipset:</b> I/O Controller Hub 9 (ICH9) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for [serial], hardware monitoring (temperature, voltage, fan speed)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	Supports ThinkVantage® technologies
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DVI-D), <i>Some:</i> serial (9-pin)	
ExpressCard/54	<i>Some:</i> One slot (ExpressCard/34, ExpressCard/54)	EPEAT™ Gold rating ENERGY STAR® 4.0-compliant GREENGUARD® certified RoHS-compliant
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY/MAC), PCIe x1, ASF 2.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	External AC/DC adapter, 120 watts, autosensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Microsoft® Windows® XP Professional with Vista® COA	1GB PC2-5300 DDR2 SODIMM (notebook) 43R1763	
↪ Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 DDR2 SODIMM (notebook) 43R1756	
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
	USB Portable Diskette Drive 05K9276	
	USB 2.0 Lenovo Multimedia Headset 40Y8518	
	USB 2.0 Lenovo Webcam 40Y8519	
	USB 2.0 Ultra Secure Memory Key 8GB 45J5918	
	USB 2.0 Portable Secure 320GB Hard Disk 43R2019	
	ThinkVision® L2240p Wide 22" Monitor 4422HB6	
	ThinkVision L2440p Wide 24" Monitor 4420HB2	
	ThinkCentre Ultra Small Under Desk Mount 40Y8625	
	Lenovo Vertical PC and Monitor Stand 41R4359	
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067	
	USB Travel Keyboard with UltraNav™ 31P9490	
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074	
	Kensington Cable Lock from Lenovo 73P2582	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

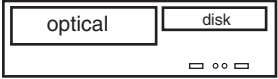
See footnotes for important warranty information  
US models announced August 19, 2008  
US models withdrawn effective January 2009

# ThinkCentre® M57p Eco Ultra Small (6395) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>o</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Intel vPro	Serial port	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57p	6395-36U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB <sup>2</sup>	DVD±RW	GMA	DVI-D	vPro		Business32	3-yr	Gbl	Feb 08
M57p	6395-37U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	vPro	Serial	Business32	3-yr		Feb 08
M57p	6395-26U	0x2	Core 2 Duo E8400	3.00	6MB	1GB	320GB	DVD±RW	GMA	DVI-D	vPro		Business32	3-yr		Feb 08
M57p	6395-27U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD	GMA	DVI-D	vPro		Business32	3-yr		Feb 08
M57p	6395-28U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD	GMA	DVI-D	vPro	Serial	Business32	3-yr		Feb 08
M57p	6395-29U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	vPro		Business32	3-yr	Gbl	Feb 08
M57p	6395-31U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	DVI-D	vPro		Business32	3-yr	HE	Feb 08

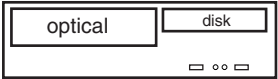
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- Only 4.5 liter volume (25% less than the 6.3 liter ThinkCentre M57 Ultra Small)
- Best acoustic and lowest power consumption of all Lenovo desktops

Positioning Processor	Ultimate enterprise stability and manageability for large enterprise Intel® Core™ 2 Duo Processor E8200 or E8400 with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket	Eco Ultra Small	
Implementation	Processor in FC-LGA8 package in LGA775 socket		
Memory	1GB or 2GB std, 4GB max <sup>o</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); Non-italics: standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None	
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, supports dual independent display	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3 to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Steel chassis supports 110 lb (50kg) monitor on top</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>	
SATA disk	160GB or 320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO		
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
EIDE controller	None		
Diskette drive	None		
Media reader	None		
Chipset	Intel Q35 Express Chipset; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for [serial], hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DVI-D), Some: serial (9-pin)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, ASF 2.0, Wake on LAN <sup>o</sup>		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 120 watts, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® Vista® Business Edition (32-bit) ♦ Vista Basic logo  <b>Preloaded applications<sup>5</sup></b> • Some (HE): Higher education software - VitalSource Library College Edition - Adobe® Instructor Resource Center - Adobe Photoshop Elements 5 (and CD) - Adobe Premier Elements 3 (and DVD) • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Norton Internet Security™ • Diskeeper® Home • PC-Doctor™ (diagnostics) • Adobe Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • Microsoft Office 2007 Trial (60-day) • Sonic RecordNow and Drive Letter Access (DVD±RW) • Corel® WinDVD® (DVD, DVD±RW)		<b>Accessories</b> 1GB PC2-5300 DDR2 SODIMM (notebook) 43R1763 2GB PC2-5300 DDR2 SODIMM (notebook) 43R1756 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ThinkVision® L1700p 17" Monitor 9417HE2 ThinkVision L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 ThinkCentre Ultra Small Under Desk Mount 40Y8625 Lenovo Vertical PC and Monitor Stand 41R4359 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 USB Travel Keyboard with UltraNav™ 31P9490 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> <li>• Some: Serial port disablement</li> </ul> Supports ThinkVantage® technologies  EPEAT™ Gold rating ENERGY STAR® 4.0-compliant GREENGUARD® certified RoHS-compliant
<b>Limited Warranty<sup>1</sup></b> ⇨ 3-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ Post warranty maintenance services available ⇨ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378			

See footnotes for important warranty information  
 US models announced February 12, 2008  
 US models withdrawn effective January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Intel vPro	Card slot	Serial port	Preload	Global Educ	Avail date
<b>M57p</b>	6395-57U	0x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB <sup>2</sup>	DVD	GMA	DVI-D	vPro		Serial	XP Pro	None	Sep 08
<b>M57p</b>	6395-56U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	250GB	DVD±RW	GMA	DVI-D	vPro	/54		XP Pro	None	Sep 08
<b>M57p</b>	6395-54U	0x2	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	DVI-D	vPro		Serial	XP Pro	None	Sep 08
<b>M57p</b>	6395-55U	0x2	Core 2 Duo E8400	3.00	6MB	2GB	250GB	DVD±RW	GMA	DVI-D	vPro	/54		XP Pro	None	Sep 08

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- Only 4.5 liter volume (25% less than the 6.3 liter ThinkCentre M57 Ultra Small)
- Best acoustic and lowest power consumption of all Lenovo desktops
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate enterprise stability and manageability for large enterprise Intel® Core™ 2 Duo Processor E8200 or E8400 with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket		Eco Ultra Small																																													
Implementation	Processor in FC-LGA8 package in LGA775 socket																																															
Memory	1GB or 2GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Serial port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Gold rating ENERGY STAR® 4.0-compliant GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																												
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SATA disk	160GB or 250GB, SATA 3.0Gb/s 7200 rpm, vibration dampening		<p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 DDR2 SODIMM (notebook)</td><td>43R1763</td></tr> <tr><td>2GB PC2-5300 DDR2 SODIMM (notebook)</td><td>43R1756</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 2GB</td><td>45J5916</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 4GB</td><td>45J5917</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>ThinkVision® L1700p 17" Monitor</td><td>9417HE2</td></tr> <tr><td>ThinkVision L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>ThinkCentre Ultra Small Under Desk Mount</td><td>40Y8625</td></tr> <tr><td>Lenovo Vertical PC and Monitor Stand</td><td>41R4359</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>USB Travel Keyboard with UltraNav™</td><td>31P9490</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-5300 DDR2 SODIMM (notebook)	43R1763	2GB PC2-5300 DDR2 SODIMM (notebook)	43R1756	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 2GB	45J5916	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ThinkVision® L1700p 17" Monitor	9417HE2	ThinkVision L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	ThinkCentre Ultra Small Under Desk Mount	40Y8625	Lenovo Vertical PC and Monitor Stand	41R4359	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	USB Travel Keyboard with UltraNav™	31P9490	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582
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SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)																																															
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SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																																															
eSATA port	None																																															
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Chipset	Intel Q35 Express Chipset; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for [serial], hardware monitoring (temperature, voltage, fan speed)																																															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																															
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DVI-D), <i>Some:</i> serial (9-pin)																																															
ExpressCard/54	<i>Some:</i> One slot (ExpressCard/34, ExpressCard/54)																																															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																																															
Speaker	One internal speaker for business audio																																															
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Modem	None																																															
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Power supply	External AC/DC adapter, 120 watts, autosensing, 85% PSU																																															
Preloaded operating system <sup>20</sup>	- Microsoft® Windows® XP Professional with Vista® COA ↔ Disk-to-Disk Recovery (in hidden protected area)																																															
Preloaded applications <sup>5</sup>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW)</li> </ul>																																															

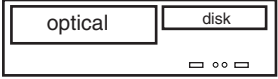
See footnotes for important warranty information  
US models announced August 19, 2008  
US models withdrawn effective January 2009

# ThinkCentre® M57p Eco Ultra Small (6397) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Intel vPro	Serial port	Vista preload	Limited warranty <sup>1</sup>	Global (G) GMP (P)	Avail date
<b>M57p</b>	6397-11U	0x2	Core 2 Duo E8200	2.66	6MB	2GB	160GB <sup>2</sup>	DVD	GMA	DVI-D	vPro	None	Business32	3-yr	G P	Feb 08

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **Only 4.5 liter volume (25% less than the 6.3 liter ThinkCentre M57 Ultra Small)**
- **Best acoustic and lowest power consumption of all Lenovo desktops**

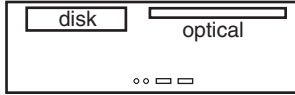
Positioning Processor	<i>Ultimate enterprise stability and manageability for large enterprise</i>		<b>Eco Ultra Small</b>			
Implementation	<b>Intel® Core™ 2 Duo Processor E8200</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None			
Memory	<b>2GB std</b> , 4GB max <sup>9</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3. to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Steel chassis supports 110 lb (50kg) monitor on top</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>			
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, supports dual independent display				<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO					
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)					
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors					
eSATA port	None					
EIDE controller	None					
Diskette drive	None					
Media reader	None					
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s, PCI Express <sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SCH5617 Super I/O for hardware monitoring (temperature, voltage, fan speed)					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DVI-D)					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)					
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec					
Speaker	One internal speaker for business audio					
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, ASF 2.0, Wake on LAN <sup>®</sup>					
Intel AMT	Intel Active Management Technology (iAMT)					
Modem	None					
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo					
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo					
Power supply	External AC/DC adapter, 120 watts, autosensing, 85% PSU				Supports ThinkVantage <sup>®</sup> technologies	
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista <sup>®</sup> Business Edition (32-bit) ⇨ Vista Basic logo		<b>Accessories</b>		EPEAT™ Gold rating ENERGY STAR <sup>®</sup> 4.0-compliant GREENGUARD <sup>®</sup> certified RoHS-compliant	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD)</li> </ul>		<ul style="list-style-type: none"> <li>1GB PC2-5300 DDR2 SODIMM (notebook) 43R1763</li> <li>2GB PC2-5300 DDR2 SODIMM (notebook) 43R1756</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision<sup>®</sup> L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>Lenovo Vertical PC and Monitor Stand 41R4359</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>USB Travel Keyboard with UltraNav™ 31P9490</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇨ <b>3-year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇨ <b>Post warranty maintenance services available</b></li> <li>⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US model announced February 12, 2008  
 US model withdrawn effective January 2009

# ThinkCentre® M57 Ultra Small (6071) - withdrawn

Personal Systems Reference (PSREF)

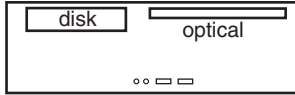
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>9</sup>	SATA disk	EIDE optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6071-BDU	1x2	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	Combo	GMA	eSATA	None	XP Pro	3-yr		Oct 07
M57	6071-B8U	1x2	Pentium E2160	1.80	1MB	1GB	80GB	Combo	GMA	eSATA	None	Business32	3-yr	Gbl	Nov 07
M57	6071-B9U	1x2	Pentium E2160	1.80	1MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Business32	3-yr		Oct 07
M57	6071-A2U	1x2	Core 2 Duo E4400	2.00	2MB	1GB	80GB	Combo	GMA	eSATA	None	Business32	3-yr		Oct 07
M57	6071-ACU	1x2	Core 2 Duo E4400	2.00	2MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Business32	3-yr		Oct 07
M57	6071-A3U	1x2	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	eSATA	None	Business32	3-yr	Gbl	Oct 07
M57	6071-ADU	1x2	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Business32	3-yr		Oct 07

Positioning Processor	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i>  <b>Intel® Pentium® Dual-Core Processor E2140 or E2160 with dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or  <b>Intel Core™ 2 Duo Processor E4400 with dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or  <b>Intel Core 2 Duo Processor E6550 with dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Ultra Small</b></p>  <p>Bay ① 3.5", 1" high, no access, std disk (desktop)                  Bay ② 5.25", *.5" high, access, std optical (notebook)</p> <p>* Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.9" W X 10.7" D X 3.5" H</li> <li>• 276mm W X 273mm D X 89mm H</li> <li>• 14.1 lb (6.4 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation			
Memory	<p><b>1GB std, 4GB max<sup>9</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; one socket available</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector</p>		
SATA disk	<p><b>80GB or 160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9</p>		
SATA cables	<p>One SATA cable (1-drop to disk), one SATA connector on planar</p>		
eSATA port	<p>One external SATA (eSATA) port</p>		
EIDE Combo	<p><i>Some</i>: 24X/24X/24X/8X Max<sup>11</sup> CD-RW/DVD-ROM Combo Drive, Ultrabay Enhanced (12.7mm high)</p>		
EIDE DVD±RW	<p><i>Some</i>: Multi-Burner DL DVD±RW Drive, Ultrabay Enhanced (12.7mm high)</p>		
EIDE controller	<p>Enhanced IDE, ATA-133, via EIDE bridge Silicon Image™ SIL3811 from ICH9</p>		
EIDE cables	<p>One cable (one 1-drop Ultrabay Enhanced cable to optical), one EIDE connector (Ultrabay Enhanced) on systemboard</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q35 Express Chipset</b>;                  I/O Controller Hub 9 (ICH9) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>		
Power supply	<p>225 watts with variable speed fan, autosensing, two diagnostic LEDs</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><i>Some</i>: Microsoft® Windows® XP Professional  <i>Some</i>: Microsoft Windows Vista® Business Edition (32-bit)                  ♦ <i>Vista models</i>: Vista Basic logo</p>		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<p>• Rescue and Recovery™                  • Client Security Solution™                  • ThinkVantage Productivity Center                  • ThinkVantage System Update                  • System Migration Assistant                  • Norton Internet Security™                  • Diskeeper® Home                  • PC-Doctor™ (diagnostics)                  • Picasa from Google                  • Microsoft Office 2007 Trial (60-day)                  • Sonic RecordNow and Drive Letter Access (combo, DVD±RW)                  • Corel® WinDVD® (combo, DVD±RW)</p>		
<b>Accessories</b>	<p>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984                  2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985                  1GB PC2-6400 NP DDR2 UDIMM 41U2977                  2GB PC2-6400 NP DDR2 UDIMM 41U2978                  250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015                  500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                  USB 2.0 Lenovo Multimedia Headset 40Y8518                  USB 2.0 Lenovo Webcam 40Y8519                  USB 2.0 Essential Memory Key 32GB 45K1258                  USB 2.0 Ultra Secure Memory Key 8GB 45J5918                  USB 2.0 Portable Secure 320GB Hard Disk 43R2019                  USB 2.0 Super Multi-Burner Drive 41N5565                  ThinkVision® L1700p 17" Monitor 9417HE2                  ThinkVision L1940p Wide 19" Monitor 4424HB6                  ThinkVision L2240p Wide 22" Monitor 4422HB6                  ThinkVision L2440p Wide 24" Monitor 4420HB2                  ThinkCentre Ultra Small Under Desk Mount 40Y8625                  Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067                  Laser Tilt Wheel Mouse (USB, PS/2) 41U3074                  Kensington Cable Lock from Lenovo 73P2582                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>		
	<p>Supports ThinkVantage® technologies</p>		
	<p>RoHS-compliant</p>		
	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>		

See footnotes for important warranty information  
 US models announced September 18 or October 16, 2007  
 US models withdrawn effective June 2008, September 2008, or January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>6</sup>	SATA disk	EIDE optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6071-BRU	1x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB <sup>2</sup>	Combo	GMA	eSATA	None	XP Pro	3-yr	None	Feb 08
M57	6071-DJU	1x2	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	eSATA	None	Business32	3-yr	None	Feb 08
M57	6071-DHU	1x2	Core 2 Duo E4500	2.20	2MB	1GB	160GB	Combo	GMA	eSATA	None	Business32	3-yr	None	Feb 08
M57	6071-BQU	1x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	None	Business32	3-yr	None	Feb 08

Positioning Processor	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i></p> <p><b>Intel® Core™ 2 Duo Processor E4500 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>	<p><b>Ultra Small</b></p>  <p>Bay ① 3.5", 1" high, no access, std disk (desktop)                  Bay ② 5.25", *.5" high, access, std optical (notebook)</p> <p>* Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)</p>
Implementation		<p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.9" W X 10.7" D X 3.5" H</li> <li>• 276mm W X 273mm D X 89mm H</li> <li>• 14.1 lb (6.4 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
Memory	<p><b>1GB std,</b> 4GB max<sup>6</sup>, <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available</p>	
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector</p>	
SATA disk	<p><b>160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>	
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9</p>	
SATA cables	<p>One SATA cable (1-drop to disk), one SATA connector on planar</p>	
eSATA port	<p>One external SATA (eSATA) port</p>	
EIDE DVD	<p><i>Some:</i> 8X/24X Max<sup>4</sup> DVD-ROM, Ultrabay Enhanced (12.7mm)</p>	
EIDE Combo	<p><i>Some:</i> 24X/24X/24X/8X Max<sup>11</sup> CD-RW/DVD-ROM Combo, Ultrabay Enhanced (12.7mm high)</p>	
EIDE controller	<p>Enhanced IDE, ATA-133, via EIDE bridge Silicon Image™ SIL3811 from ICH9</p>	
EIDE cables	<p>One cable (one 1-drop Ultrabay Enhanced cable to optical), one EIDE connector (Ultrabay Enhanced) on systemboard</p>	
Diskette drive	None	
Media reader	None	
Chipset	<p><b>Intel Q35 Express Chipset;</b> I/O Controller Hub 9 (ICH9) for SATA 3.0Gb/s, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	RoHS-compliant
Power supply	225 watts with variable speed fan, autosenesing, two diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some:</i> Microsoft® Windows® XP Professional with Vista® COA</p> <p>- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)</p> <p>◇ <i>Vista models:</i> Vista Basic logo</p>	
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (combo) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo, DVD)</li> </ul>	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>USB Travel Keyboard with UltraNav™ 31P9490</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

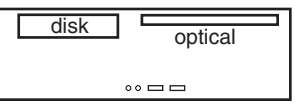
See footnotes for important warranty information  
 US models announced January 22, 2008  
 US models withdrawn effective September 2008 or January 2009

# ThinkCentre® M57 Ultra Small (6071) - August 2008 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>9</sup>	SATA disk	EIDE optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57</b>	6071-E3U	1x2	Pentium E2200	2.20	1MB	1GB	160GB <sup>2</sup>	DVD	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E4U	1x2	Pentium E2200	2.20	1MB	2GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E5U	1x2	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E7U	1x2	Core 2 Duo E7200	2.53	3MB	2GB	160GB	DVD	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E6U	1x2	Core 2 Duo E7300	2.66	3MB	2GB	250GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E9U	1x2	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E8U	1x2	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD	GMA+ADD2	eSATA	No	XP Pro	3-yr	None	Sep 08
<b>M57</b>	6071-E1U	1x2	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD	GMA+ADD2	eSATA	No	Bus32	3-yr	None	Sep 08
<b>M57</b>	6071-E2U	1x2	Core 2 Duo E7300	2.66	3MB	1GB	250GB	DVD±RW	GMA+ADD2	eSATA	No	Bus32	3-yr	None	Sep 08

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Pentium® Dual-Core Processor E2200</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E7200</b> or <b>E7300</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Ultra Small</b> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② 5.25", *.5" high, access, std optical (notebook) * Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)
Memory	<b>1GB</b> or <b>2GB</b> std, 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Slot 1: half-length (175mm), full-height, PCI Express x1 (via riser card; used by ADD2 DVI-D adapter) <ul style="list-style-type: none"><li>• Business black color; metal case</li><li>• 10.9" W X 10.7" D X 3.5" H</li><li>• 276mm W X 273mm D X 89mm H</li><li>• 14.1 lb (6.4 kg) in maximum configuration</li><li>• Toolless cover flips up and tilts backward on rear hinges</li><li>• Toolless disk and optical drive removal</li><li>• Bays 1 and 2 flip up (latched and pivoting)</li><li>• PCI Express x1 slot on riser card (one 32-bit PCI 2.3 slot also on riser but not supported simultaneously)</li><li>• Toolless adapter and riser card retention</li><li>• Steel chassis supports 100 lb (45kg) monitor on top</li><li>• System floor stand for vertical orientation</li></ul>
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector <b>ADD2 DVI-D Monitor Connection (HDCP)</b> , PCI Express® adapter in PCIe x1 slot, provides DVI-D connector to support second monitor, HDCP-compliant	<b>Security</b> <ul style="list-style-type: none"><li>• Security chip (see information on left)</li><li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li><li>• Power-on password</li><li>• Administrator password</li><li>• Hard disk password</li><li>• Boot sequence control</li><li>• Boot without keyboard, mouse</li><li>• Serial port I/O control</li><li>• Parallel port I/O control</li><li>• Individual USB port disablement</li><li>• eSATA port disablement</li></ul>
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<b>Supports ThinkVantage® technologies</b>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9	
SATA cables	One SATA cable (1-drop to disk), one SATA connector on planar	
eSATA port	One external SATA (eSATA) port	
EIDE DVD	<i>Some</i> : 8X/24X Max <sup>4</sup> DVD-ROM, Ultrabay Enhanced (12.7mm)	<b>RoHS-compliant</b>
EIDE DVD±RW	<i>Some</i> : Multi-Burner DL DVD±RW Drive, Ultrabay Enhanced (12.7mm high)	
EIDE controller	Enhanced IDE, ATA-133, via EIDE bridge Silicon Image™ SIL3811 from ICH9	
EIDE cables	One cable (one 1-drop Ultrabay Enhanced cable to optical), one EIDE connector (Ultrabay Enhanced) on systemboard	
Diskette drive	None	<b>Limited Warranty<sup>1</sup></b> ↔ <b>3-year parts and labor</b> ↔ <b>International Warranty Service<sup>9</sup></b> ↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b>
Media reader	None	
Chipset	<b>Intel Q35 Express Chipset</b> : I/O Controller Hub 9 (ICH9) for SATA 3.0Gb/s, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15, DVI-D), eSATA	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	225 watts with variable speed fan, autosensing, two diagnostic LEDs	

Preloaded operating system <sup>20</sup>	Accessories	
- <i>Some</i> : Microsoft® Windows® XP Professional with Vista® COA	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
- <i>Some</i> : Microsoft Windows Vista Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985
↔ <i>Vista models</i> : Vista Premium logo	1GB PC2-6400 NP DDR2 UDIMM	41U2977
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	2GB PC2-6400 NP DDR2 UDIMM	41U2978
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
• Client Security Solution™	USB 2.0 Lenovo Multimedia Headset	40Y8518
• ThinkVantage Productivity Center	USB 2.0 Lenovo Webcam	40Y8519
• Norton Internet Security™	USB 2.0 Ultra Secure Memory Key 8GB	45J5918
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Portable Secure 320GB Hard Disk	43R2019
• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)	ThinkVision® L2240p Wide 22" Monitor	4422HB6
• Sonic RecordNow and Drive Letter Access (DVD±RW)	ThinkVision L2440p Wide 24" Monitor	4420HB2
• Corel® WinDVD® (DVD, DVD±RW)	ThinkCentre Ultra Small Under Desk Mount	40Y8625
• Corel WinDVD Creator (DVD±RW) (XP)	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067
	USB Travel Keyboard with UltraNav™	31P9490
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074
	Kensington Cable Lock from Lenovo	73P2582
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

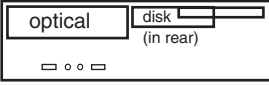
See footnotes for important warranty information  
US models announced August 19, 2008  
US models withdrawn effective March 2009

# ThinkCentre® M57 Small (9970) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	9970-A1U	2x3	Pentium E2200	2.20	1MB	1GB	160GB <sup>2</sup>	DVD	GMA	eSATA	No	XP Pro		3-yr	No	Jun 08
M57	9970-A2U	2x3	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA	eSATA	No	XP Pro		3-yr	No	Jun 08
M57	9970-A3U	2x3	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD±RW	GMA	eSATA	No	XP Pro		3-yr	No	Jun 08
M57	9970-A4U	2x3	Pentium E2200	2.20	1MB	1GB	160GB	DVD	GMA	eSATA	No	Bus32	Prem	3-yr	No	Aug 08
M57	9970-A5U	2x3	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA	eSATA	No	Bus32	Prem	3-yr	No	Aug 08

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	<p><b>Ultimate stability for small and medium businesses</b>  <b>Intel® Pentium® Dual-Core Processor E2200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or  <b>Intel Core™ 2 Duo Processor E7200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or  <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>							<p><b>Small</b></p> 																																													
Implementation	<p><b>1GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>							<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, 32-bit PCI 2.3 (5v)</p>																																													
Memory	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>							<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>																																													
Graphics	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts                  SATA controller Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support                  SATA DVD <i>Some</i>: DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)                  SATA DVD±RW <i>Some</i>: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)                  SATA cables (each 1-drop to device), two SATA connectors on planar                  eSATA port One external SATA (eSATA) port                  EIDE controller None                  Diskette drive None                  Media reader None</p>							<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>																																													
SATA disk	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express<sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC<sup>®</sup> SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>							<p>Supports ThinkVantage<sup>®</sup> technologies</p>																																													
SATA controller	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>							<p>RoHS-compliant</p>																																													
SATA DVD	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA</p>							<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																													
SATA DVD±RW	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>																																																				
SATA cables	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)                  High Definition (HD) Audio, Analog Devices AD1882 codec</p>																																																				
eSATA port	<p>One internal speaker for business audio</p>																																																				
EIDE controller	<p>Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN<sup>®</sup>, ASF2.0</p>																																																				
Diskette drive	<p>None</p>																																																				
Media reader	<p>None</p>																																																				
Chipset	<p>Winbond<sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>																																																				
Front ports	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>																																																				
Rear ports	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>																																																				
Internal connector	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>																																																				
Rear audio ports	<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- <i>Some</i>: Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</li> <li>- <i>Some</i>: Microsoft Windows Vista Business Edition (32-bit)</li> </ul> <p><b>Preloaded applications<sup>5</sup> (all OSes)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW) (XP)</li> </ul> <p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>USB 2.0 Super Multi-Burner Drive</td><td>41N5565</td></tr> <tr><td>ThinkVision<sup>®</sup> L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI™ Radeon™ HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>							1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	USB 2.0 Super Multi-Burner Drive	41N5565	ThinkVision <sup>®</sup> L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962		
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984																																																				
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ADD2 DVI-D Monitor Connection (HDCP)	43R1985																																																				
ATI™ Radeon™ HD 2400 Pro 128MB	43R1961																																																				
ATI Radeon HD 2400 XT 256MB	43R1962																																																				
Keyboard																																																					
Mouse																																																					
Power supply																																																					

See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective March 2009



# ThinkCentre® M57 Small (6072) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Floor stand	Preload	Global Educ	Avail date
M57	6072-C2U	2x3	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	DVD	GMA	eSATA	None	Stand	XP Pro		Oct 07
M57	6072-C3U	2x3	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	eSATA	None	Stand	XP Pro		Oct 07
M57	6072-ENU	2x3	Pentium E2160	1.80	1MB	1GB	160GB	DVD	GMA	eSATA	None	Stand	XP Pro	Gbl	Dec 07
M57	6072-C1U	2x3	Core 2 Duo E4400	2.00	2MB	1GB	80GB	DVD	GMA	eSATA	None	Stand	XP Pro		Oct 07
M57	6072-EPU	2x3	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	eSATA	None	Stand	XP Pro	Gbl	Dec 07
M57	6072-BJU	2x3	Pentium E2160	1.80	1MB	1GB	80GB	DVD	GMA	eSATA	None	Stand	Bus32	Gbl	Nov 07
M57	6072-BKU	2x3	Pentium E2160	1.80	1MB	1GB	80GB	Combo	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-BMU	2x3	Pentium E2160	1.80	1MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-ERU	2x3	Pentium E2160	1.80	1MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Stand	Bus32	Gbl	Dec 07
M57	6072-A4U	2x3	Core 2 Duo E4400	2.00	2MB	1GB	80GB	DVD	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-BNU	2x3	Core 2 Duo E4400	2.00	2MB	1GB	80GB	Combo	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-AJU	2x3	Core 2 Duo E4400	2.00	2MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-ATU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-BVU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	eSATA	None	Stand	Bus32	Gbl	Oct 07
M57	6072-A5U	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	eSATA	None	Stand	Bus32	Gbl	Oct 07
M57	6072-ASU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Stand	Bus32		Oct 07
M57	6072-EQU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Stand	Bus32	Gbl	Dec 07

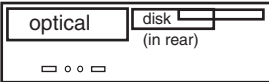
  

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Pentium® Dual-Core Processor E2140</b> or <b>E2160</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4400</b> or <b>E4500</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket	<b>Small</b>	
Implementation		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, no access, std disk</p> <p>Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)</p> <p>Slot 2: Low Profile, 32-bit PCI 2.3 (5v)</p>	
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some</i>: system floor stand for vertical orientation</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>80GB</b> or <b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	One external SATA (eSATA) port		
EIDE controller	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express <sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN <sup>®</sup> , ASF2.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some</i> : Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
- <i>Some</i> : Microsoft Windows Vista Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
◇ <i>Vista models</i> : Vista Basic logo	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	USB 2.0 Lenovo Multimedia Headset	40Y8518	
	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	
	ThinkVision <sup>®</sup> L2440p Wide 24" Monitor	4420HB2	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB	43R1961	
	ATI Radeon HD 2400 XT 256MB	43R1962	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)			
• Rescue and Recovery <sup>™</sup>			
• Client Security Solution <sup>™</sup>			
• ThinkVantage Productivity Center			
• Norton Internet Security <sup>™</sup>			
• Microsoft Office 2007 Trial (60-day)			
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul> <p>Supports ThinkVantage<sup>®</sup> technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

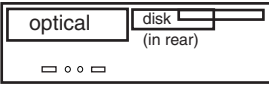
See footnotes for important warranty information  
 US models announced September 18, October 16, or December 4, 2007  
 US models withdrawn effective June 2008, September 2008, or January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6072-FMU	2x3	Core 2 Duo E4500	2.20	2MB	1GB	160GB <sup>2</sup>	DVD	GMA	eSATA	None	XP Pro	3-yr	None	Feb 08
M57	6072-DNU	2x3	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	None	XP Pro	3-yr	None	Feb 08
M57	6072-FJU	2x3	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	eSATA	None	Bus32	3-yr	None	Feb 08
M57	6072-FKU	2x3	Core 2 Duo E4500	2.20	2MB	1GB	160GB	Combo	GMA	eSATA	None	Bus32	3-yr	None	Feb 08
M57	6072-FLU	2x3	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD±RW	GMA	eSATA	None	Bus32	3-yr	None	Feb 08
M57	6072-DMU	2x3	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	None	Bus32	3-yr	None	Feb 08

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Core™ 2 Duo Processor E4500 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 with dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)	
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 (5v)	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	One external SATA (eSATA) port		
EIDE controller	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express <sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC<sup>®</sup> SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN <sup>®</sup> , ASF2.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- <i>Some</i>: Microsoft® Windows® XP Professional with Vista® COA</li> <li>- <i>Some</i>: Microsoft Windows Vista Business Edition (32-bit)</li> <li>◇ <i>Vista models</i>: Vista Basic logo</li> </ul>	<b>Accessories</b>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (combo, DVD) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD, DVD±RW)</li> </ul>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced January 22, 2008  
 US models withdrawn effective September 2008 or January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6072-GUU	2x3	Pentium E2200	2.20	1MB	1GB	160GB <sup>2</sup>	DVD	GMA	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-GVU	2x3	Pentium E2200	2.20	1MB	2GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-GWU	2x3	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H2U	2x3	Core 2 Duo E7200	2.53	3MB	2GB	250GB	DVD	GMA	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H1U	2x3	Core 2 Duo E7300	2.66	3MB	2GB	250GB	DVD±RW	GMA	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H3U	2x3	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H4U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H5U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	250GB	DVD±RW	GMA	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H6U	2x3	Core 2 Quad Q9300	2.50	6MB	2GB	250GB	DVD±RW	GMA+ADD2	eSATA	No	XP Pro	3-yr	No	Aug 08
M57	6072-H7U	2x3	Core 2 Quad Q9300	2.50	6MB	2GB	320GB	DVD±RW	<b>2400XT</b>	eSATA	No	XP Pro	3-yr	No	Aug 08
Positioning	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E7200</b> or <b>E7300</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300</b> with <b>quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache</p>									<p><b>Small</b></p> 					
Processor	<p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>									<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)*                  Slot 2: Low Profile, 32-bit PCI 2.3 (5v)</p> <p>* used in some models</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>					
Implementation	<p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>									<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>					
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>									<p><b>Supports ThinkVantage® technologies</b></p>					
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector  <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express® adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant  <i>Some:</i> <b>ATI™ Radeon™ HD 2400 XT</b>, PCI Express x16 adapter, 256MB, dual-head support, VGA and DVI-I connectors via dongle, S-Video out for TV-out, HDCP, DirectX® 10, ATI Avivo™, dual-link DVI, 35 watts</p>									<p><b>RoHS-compliant</b></p>					
SATA disk	<p><b>160GB, 250GB, or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>									<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>					
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>														
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)</p>														
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>														
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors on planar</p>														
eSATA port	<p>One external SATA (eSATA) port</p>														
EIDE controller	<p>None</p>														
Diskette drive	<p>None</p>														
Media reader	<p>None</p>														
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>														
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>														
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), eSATA, H7U: monitor (VGA DB-15, DVI-I), S-Video out;                  Others: monitor (VGA DB-15, DVI-D in some models)</p>														
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>														
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>														
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>														
Speaker	<p>One internal speaker for business audio</p>														
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0</p>														
Intel AMT	<p>None</p>														
Modem	<p>None</p>														
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>														
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>														
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>														
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>														
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® XP Professional with Vista® COA</p> <p>↪ Disk-to-Disk Recovery (in hidden protected area)</p>									<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Other accessories at <b>lenovo.com/accessories</b></li> </ul>					

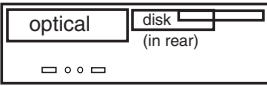
See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective March 2009

# ThinkCentre® M57 Small (6072) - Vista® (August 2008) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6072-HBU	2x3	Core 2 Duo E7200	2.53	3MB	1GB	160GB <sup>2</sup>	DVD	GMA	eSATA	No	Bus32	3-yr	No	Aug 08
M57	6072-HCU	2x3	Core 2 Duo E7200	2.53	3MB	2GB	160GB	DVD±RW	GMA+ADD2	eSATA	No	Bus32	3-yr	No	Aug 08
M57	6072-HDU	2x3	Core 2 Duo E7200	2.53	3MB	2GB	250GB	DVD	GMA+ADD2	eSATA	No	Bus32	3-yr	No	Aug 08
M57	6072-HFU	2x3	Core 2 Duo E7300	2.66	3MB	1GB	160GB	DVD	GMA+ADD2	eSATA	No	Bus32	3-yr	No	Aug 08
M57	6072-HEU	2x3	Core 2 Duo E7300	2.66	3MB	2GB	250GB	DVD±RW	GMA+ADD2	eSATA	No	Bus32	3-yr	No	Aug 08

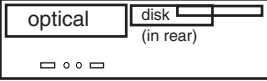
  

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market Intel® Core™ 2 Duo Processor E7200 or E7300 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 3MB shared L2 cache</i>	<b>Small</b>	 <p>optical disk (in rear)</p>
Implementation	Processor in FC-LGA8 package in LGA775 socket		
Memory	<b>1GB or 2GB std</b> , 8GB max <sup>a</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)	
Graphics	<i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b> , PCI Express <sup>®</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant	Slot 1: Low Profile, PCI Express x16 (35w max)* Slot 2: Low Profile, 32-bit PCI 2.3 (5v)	* used in some models <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	One external SATA (eSATA) port		
EIDE controller	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SCH5617 Super I/O</b> for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN <sup>®</sup> , ASF2.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul> Supports ThinkVantage <sup>®</sup> technologies
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosenesing, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft <sup>®</sup> Windows <sup>®</sup> Vista Business Edition (32-bit) ↕ Vista Premium logo		
<b>Preloaded applications<sup>5</sup></b>	• Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Norton Internet Security™ (90 days of virus definitions) • Diskeeper <sup>®</sup> Home • PC-Doctor™ (diagnostics) • Adobe <sup>®</sup> Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • Microsoft Office 2007 Trial (60-day) • Sonic RecordNow and Drive Letter Access (DVD±RW) • Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)		
<b>Accessories</b>	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision <sup>®</sup> L1700p 17" Monitor 9417HE2 ThinkVision L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		↕ <b>3-year parts and labor</b> ↕ <b>International Warranty Service<sup>9</sup></b> ↕ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↕ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ↕ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ↕ <b>Post warranty maintenance services available</b> ↕ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective March 2009

Name	Type-model	Slot x bay	Processor	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	ENERGY STAR 4.0	Intel vPro	Floor stand	Vista preload	Vista logo	Global Educ	Avail date
M57	9181-A2U	2x3	Pentium E2180	2.00	1MB	2GB	160GB <sup>2</sup>	DVD±RW	GMA+ADD2	eSATA	ES40	None	Bus32	Prem	Gbl	Dec 07
M57	9181-A1U	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	Combo	GMA	eSATA	ES40	None	Stand	Bus32	Basic	Nov 07

• *These models have a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Pentium® Dual-Core Processor E2180</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E6550</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket		<b>Small</b>	
Implementation	Processor in FC-LGA6 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)	
Memory	<b>1GB</b> or <b>2GB</b> std, 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> dual memory in two sockets; two sockets available <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express x16 (35w max)* Slot 2: Low Profile, 32-bit PCI 2.3 (5v) * used in some models	
Graphics	<i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b> , PCI Express® adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some:</i> system floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Gold rating ENERGY STAR 4.0-compliant RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support			
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA Drive (41N5620)			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar			
eSATA port	One external SATA (eSATA) port			
EIDE controller	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs, 80% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Microsoft® Vista® Business Edition (32-bit)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984		
	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985		
	1GB PC2-6400 NP DDR2 UDIMM	41U2977		
	2GB PC2-6400 NP DDR2 UDIMM	41U2978		
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015		
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	USB 2.0 Lenovo Multimedia Headset	40Y8518		
	USB 2.0 Lenovo Webcam	40Y8519		
	USB 2.0 Essential Memory Key 32GB	45K1258		
	USB 2.0 Ultra Secure Memory Key 2GB	45J5916		
	USB 2.0 Ultra Secure Memory Key 4GB	45J5917		
	USB 2.0 Ultra Secure Memory Key 8GB	45J5918		
	USB 2.0 Portable 160GB Hard Disk	43R1784		
	USB 2.0 Portable Secure 320GB Hard Disk	43R2019		
	USB 2.0 Super Multi-Burner Drive	41N5565		
	ThinkVision® L1940p Wide 19" Monitor	4424HB6		
	ThinkVision L2240p Wide 22" Monitor	4422HB6		
	ThinkVision L2440p Wide 24" Monitor	4420HB2		
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		
	Kensington Cable Lock from Lenovo	73P2582		
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961		
	ATI Radeon HD 2400 XT 256MB	43R1962		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
US models announced September 18 or December 4, 2007  
US models withdrawn effective January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57</b>	9978-A1U	4x5	Core 2 Duo E7200	2.53	3MB	1GB	160GB <sup>2</sup>	DVD±RW	GMA	None	None	XP Pro	3-yr	None	Jun 08
<b>M57</b>	9978-A2U	4x5	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD±RW	GMA	None	None	XP Pro	3-yr	None	Jun 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program

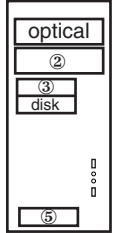
<p><b>Positioning</b> Processor</p> <p><i>Ultimate stability for small and medium businesses</i></p> <p><b>Intel® Core™ 2 Duo Processor E7200</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket</p> <p><b>Implementation</b></p> <p><b>Memory</b> <b>1GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p> <p><b>Graphics</b> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p> <p><b>SATA disk</b> <b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p> <p><b>SATA controller</b> Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p> <p><b>SATA DVD±RW</b> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p> <p><b>SATA cables</b> Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar</p> <p><b>eSATA port</b> None</p> <p><b>EIDE controller</b> None</p> <p><b>Diskette drive</b> None</p> <p><b>Media reader</b> None</p> <p><b>Chipset</b> <b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p> <p><b>Front ports</b> Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p><b>Rear ports</b> Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p> <p><b>Internal connector</b> Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p> <p><b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p> <p><b>Audio</b> High Definition (HD) Audio, Analog Devices AD1882 codec</p> <p><b>Speaker</b> One internal speaker for business audio</p> <p><b>Ethernet</b> Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0</p> <p><b>Intel AMT</b> None</p> <p><b>Modem</b> None</p> <p><b>Security chip</b> Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p> <p><b>Keyboard</b> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p> <p><b>Mouse</b> Optical Wheel Mouse (USB connector), black, Lenovo logo</p> <p><b>Power supply</b> 280 watts with variable speed fan, manual switch, two diagnostic LEDs</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical          Bay ② 5.25", 1.6" high, access, open          Bay ③ 3.5", 1" high, access, open (reader/diskette)          Bay ④ 3.5", 1" high, no access, std disk          Bay ⑤ 3.5", 1" high, no access, opt disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)          Slot 2: half-length, full-height, PCI Express x1          Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)          Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul> <p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Microsoft® Windows® XP Professional with Vista® COA</li> <li>↔ Disk-to-Disk Recovery (in hidden protected area)</li> </ul> <p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW)</li> </ul> <p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>ThinkVision® L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI™ Radeon™ HD 2400 Pro 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 2600 XT 512MB</td> <td>43R1963</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td>NVIDIA Quadro 256MB FX 370</td> <td>43R1766</td> </tr> <tr> <td>NVIDIA Quadro 512MB FX 1700</td> <td>43R1767</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>          Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ThinkVision® L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767
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NVIDIA Quadro 256MB FX 370	43R1766																																														
NVIDIA Quadro 512MB FX 1700	43R1767																																														

See footnotes for important warranty information  
 US models announced June 24, 2008  
 US models withdrawn effective March 2009

# ThinkCentre® M57 Tower (6075) - withdrawn

Personal Systems Reference (PSREF)

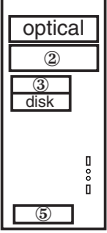
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>9</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6075-BSU	4x5	Pentium E2140	1.60	1MB	1GB	80GB <sup>2</sup>	DVD	GMA	None	None	XP Pro	3-yr		Oct 07
M57	6075-BTU	4x5	Pentium E2140	1.60	1MB	1GB	80GB	Combo	GMA	None	None	XP Pro	3-yr		Oct 07
M57	6075-BRU	4x5	Core 2 Duo E4400	2.00	2MB	1GB	80GB	DVD	GMA	None	None	XP Pro	3-yr		Oct 07
M57	6075-BGU	4x5	Pentium E2160	1.80	1MB	1GB	80GB	DVD	GMA	None	None	Business32	3-yr	Gbl	Nov 07
M57	6075-BHU	4x5	Pentium E2160	1.80	1MB	1GB	80GB	Combo	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-BJU	4x5	Pentium E2160	1.80	1MB	1GB	320GB	DVD±RW	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-A4U	4x5	Core 2 Duo E4400	2.00	2MB	1GB	80GB	DVD	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-AEU	4x5	Core 2 Duo E4400	2.00	2MB	1GB	160GB	DVD±RW	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-AHU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-BQU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	None	None	Business32	3-yr	Gbl	Oct 07
M57	6075-AGU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	None	None	Business32	3-yr		Oct 07
M57	6075-A5U	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	None	None	Business32	3-yr	Gbl	Oct 07
M57	6075-AFU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	None	None	Business32	3-yr		Oct 07

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Pentium® Dual-Core Processor E2140</b> or <b>E2160</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4400</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket										<b>Tower</b>		
Implementation	Processor in FC-LGA6 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>1GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk		
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
SATA disk	<b>80, 160, or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support												
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)												
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive												
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar												
eSATA port	None												
EIDE controller	None												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express <sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN <sup>®</sup> , ASF2.0												
Intel AMT	None												
Modem	None												
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs												
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>												
- <i>Some</i> : Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984												
- <i>Some</i> : Microsoft Windows Vista <sup>®</sup> Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985												
◇ <i>Vista models</i> : Vista Basic logo	1GB PC2-6400 NP DDR2 UDIMM 41U2977												
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	2GB PC2-6400 NP DDR2 UDIMM 41U2978												
• Rescue and Recovery™	USB 2.0 Ultra Secure Memory Key 8GB 45J5918												
• Client Security Solution™	ThinkVision <sup>®</sup> L2440p Wide 24" Monitor 4420HB2												
• ThinkVantage Productivity Center	Kensington Cable Lock from Lenovo 73P2582												
• Diskeeper <sup>®</sup> Home	ADD2 DVI-D Monitor Connection (HDCP) 43R1985												
• Microsoft Office 2007 Trial (60-day)	ATI™ Radeon™ HD 2400 Pro 128MB 43R1961												
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	ATI Radeon HD 2400 XT 256MB 43R1962												
• Corel <sup>®</sup> WinDVD <sup>®</sup> (combo, DVD, DVD±RW)	ATI Radeon HD 2600 XT 512MB 43R1963												
	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290 43R1765												
	NVIDIA Quadro 256MB FX 370 43R1766												
	NVIDIA Quadro 512MB FX 1700 43R1767												
	Other accessories at <b>lenovo.com/accessories</b>												
												<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
												Supports ThinkVantage <sup>®</sup> technologies	
												RoHS-compliant	
												<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced September 18 or October 16, 2007  
 US models withdrawn effective June 2008, September 2008, or January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Vista logo	Global Educ	Avail date
M57	6075-E7U	4x5	Pentium E2160	1.80	1MB	1GB	160GB <sup>2</sup>	DVD	GMA	None	None	XP Pro		Gbl	Dec 07
M57	6075-E8U	4x5	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	None	None	XP Pro		Gbl	Dec 07
M57	6075-DNU	4x5	Core 2 Quad Q6600	2.40	8MB	2GB	160GB	DVD±RW	GMA	None	None	XP Pro			Dec 07
M57	6075-EAU	4x5	Pentium E2160	1.80	1MB	1GB	160GB	DVD±RW	GMA	None	None	Business32	Basic	Gbl	Dec 07
M57	6075-E9U	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	None	None	Business32	Basic	Gbl	Dec 07
M57	6075-DPU	4x5	Core 2 Quad Q6600	2.40	8MB	2GB	160GB	DVD±RW	GMA	None	None	Business32	Prem		Dec 07

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i></p> <p><b>Intel® Pentium® Dual-Core Processor E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache or <b>Intel Core 2 Quad Processor Q6600</b> with quad-core (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 8MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 package in LGA775 socket	<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p> <p>Bay ⑤ 3.5", 1" high, no access, opt disk</p>
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>	<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCI Express x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>	
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>	
SATA DVD	<p><i>Some</i>: DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)</p>	
SATA DVD±RW	<p><i>Some</i>: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>	
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar</p>	
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some</i>: Microsoft® Windows® XP Professional with Vista® COA</p> <p>- <i>Some</i>: Microsoft Windows Vista Business Edition (32-bit)</p>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>ThinkVision® L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 2600 XT 512MB 43R1963</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 43R1766</li> <li>NVIDIA Quadro 512MB FX 1700 43R1767</li> </ul> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	
		<p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced December 4, 2007  
 US models withdrawn effective September 2008 or January 2009



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6075-F8U	4x5	Core 2 Duo E4500	2.20	2MB	1GB	160GB <sup>2</sup>	DVD	GMA	None	None	XP Pro	3-yr	None	Feb 08
M57	6075-DMU	4x5	Core 2 Duo E8200	2.66	6MB	1GB	160GB	DVD±RW	GMA	None	None	XP Pro	3-yr	None	Feb 08
M57	6075-F9U	4x5	Core 2 Duo E4500	2.20	2MB	1GB	160GB	DVD	GMA	None	None	Business32	3-yr	None	Feb 08
M57	6075-F4U	4x5	Core 2 Duo E4500	2.20	2MB	1GB	160GB	Combo	GMA	None	None	Business32	3-yr	None	Feb 08
M57	6075-DLU	4x5	Core 2 Duo E8200	2.66	6MB	1GB	160GB	DVD±RW	GMA	None	None	Business32	3-yr	None	Feb 08

Positioning Processor	<i>Ultimate enterprise stability for large enterprise and mid-market</i> <b>Intel® Core™ 2 Duo Processor E4500 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 with dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<b>Tower</b>		
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk		
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support												
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max* Drive (41N5618)										Supports ThinkVantage® technologies		
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive												
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA Drive (41N5620)										RoHS-compliant		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar												
eSATA port	None										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>		
EIDE controller	None												Supports ThinkVantage® technologies
Diskette drive	None												
Media reader	None										RoHS-compliant		
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										Supports ThinkVantage® technologies		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										Supports ThinkVantage® technologies		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec										Supports ThinkVantage® technologies		
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN®, ASF2.0										Supports ThinkVantage® technologies		
Intel AMT	None												
Modem	None										Supports ThinkVantage® technologies		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo										Supports ThinkVantage® technologies		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs										Supports ThinkVantage® technologies		
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- <i>Some</i>: Microsoft® Windows® XP Professional with Vista® COA</li> <li>- <i>Some</i>: Microsoft Windows Vista Business Edition (32-bit)</li> <li>↔ <i>Vista models</i>: Vista Basic logo</li> </ul>												Supports ThinkVantage® technologies
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW) (XP)</li> </ul>										Supports ThinkVantage® technologies		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>ThinkVision® L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 2600 XT 512MB 43R1963</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 43R1766</li> <li>NVIDIA Quadro 512MB FX 1700 43R1767</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>												Supports ThinkVantage® technologies

See footnotes for important warranty information  
 US models announced January 22, 2008  
 US models withdrawn effective September 2008 or January 2009

# ThinkCentre® M57 Tower (6075) - August 2008 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57	6075-GAU	4x5	Pentium E2200	2.20	1MB	1GB	160GB <sup>2</sup>	DVD	GMA	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-GBU	4x5	Pentium E2200	2.20	1MB	2GB	160GB	DVD±RW	GMA+ADD2	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-GCU	4x5	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA+ADD2	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-GEU	4x5	Core 2 Duo E7200	2.53	3MB	2GB	160GB	DVD	GMA	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-GDU	4x5	Core 2 Duo E7300	2.66	3MB	2GB	250GB	DVD±RW	GMA	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-G9U	4x5	Core 2 Quad Q9300	2.50	6MB	2GB	320GB	DVD±RW	<b>2400XT</b>	None	None	XP Pro	3-yr	None	Aug 08
M57	6075-G5U	4x5	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD	GMA	None	None	Bus32	3-yr	None	Aug 08
M57	6075-G7U	4x5	Core 2 Duo E7200	2.53	3MB	1GB	160GB	DVD±RW	GMA+ADD2	None	None	Bus32	3-yr	None	Aug 08
M57	6075-G6U	4x5	Core 2 Duo E7200	2.53	3MB	2GB	160GB	DVD±RW	GMA	None	None	Bus32	3-yr	None	Aug 08
M57	6075-G8U	4x5	Core 2 Duo E7300	2.66	3MB	2GB	250GB	DVD±RW	GMA+ADD2	None	None	Bus32	3-yr	None	Aug 08
Positioning Processor	<b>Ultimate enterprise stability for large enterprise and mid-market Intel® Pentium® Dual-Core Processor E2200 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E7200 or E7300 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 1066MHz system bus, and 3MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300 with quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket									<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket									Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk					
Memory	<b>1GB or 2GB std,</b> 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available									Slot 1: half-length, full-height, PCI Express x16 (75w max) <sup>*</sup> Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v) <sup>*</sup> used in some models					
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP),</b> PCI Express <sup>®</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant <i>Some:</i> <b>ATI™ Radeon™ HD 2400 XT,</b> PCI Express x16 adapter, 256MB, dual-head support, VGA and DVI-I connectors via dongle, S-Video out for TV-out, HDCP, DirectX <sup>®</sup> 10, ATI Avivo™, dual-link DVI, 35 watts									<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
SATA disk	<b>160GB, 250GB,</b> or <b>320GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618) <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620) Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on panel									<b>Supports ThinkVantage® technologies</b>					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support									<b>RoHS-compliant</b>					
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618)									<b>Limited Warranty<sup>1</sup></b>					
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)									<ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>					
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on panel														
eSATA port	None														
EIDE controller	None														
Diskette drive	None														
Media reader	None														
Chipset	<b>Intel Q35 Express Chipset;</b> I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC <sup>®</sup> SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), G9U: monitor (VGA DB-15, DVI-I), S-Video out; Others: monitor (VGA DB-15, DVI-D in some models)														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN <sup>®</sup> , ASF2.0														
Intel AMT	None														
Modem	None														
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo														
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo														
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs														
<b>Preloaded operating system<sup>20</sup></b>			<b>Accessories</b>												
- <i>Some:</i> Microsoft® Windows® XP Professional with Vista® COA			1GB PC2-6400 NP DDR2 UDIMM			41U2977									
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)			2GB PC2-6400 NP DDR2 UDIMM			41U2978									
↔ <i>Vista models:</i> Vista Premium logo			ADD2 DVI-D Monitor Connection (HDCP)			43R1985									
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)			ATI™ Radeon™ HD 2400 Pro 128MB			43R1961									
• Rescue and Recovery™			ATI Radeon HD 2400 XT 256MB			43R1962									
• Norton Internet Security™			ATI Radeon HD 2600 XT 512MB			43R1963									
• Microsoft Office 2007 Trial (60-day)			NVIDIA® Quadro™ 256MB NVS 290			43R1765									
			NVIDIA Quadro 256MB FX 370			43R1766									
			NVIDIA Quadro 512MB FX 1700			43R1767									
			Other accessories at <b>lenovo.com/accessories</b>												

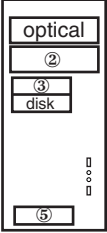
See footnotes for important warranty information  
 US models announced August 19, 2008  
 US models withdrawn effective March 2009

# ThinkCentre® M57 Tower (9174) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Memory <sup>9</sup>	SATA disk	SATA optical	Graphics	eSATA port	ENERGY STAR 4.0	Intel vPro	Vista preload	Vista logo	Global Educ	Avail date
M57	9174-A2U	4x5	Pentium E2180	2.00	1MB 2GB	160GB <sup>2</sup>	DVD±RW	GMA+ADD2	None	ES40	None	Bus32	Prem	Gbl	Dec 07
M57	9174-A1U	4x5	Core 2 Duo E6550	2.33	4MB 1GB	160GB	Combo	GMA	None	ES40	None	Bus32	Basic		Oct 07

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate enterprise stability for large enterprise and mid-market</i>  <b>Intel® Pentium® Dual-Core Processor E2180</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>			
Implementation														
Memory	<p><b>1GB or 2GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>													
Graphics	<p><i>All:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector  <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express<sup>®</sup> adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk                  Bay ⑤ 3.5", 1" high, no access, opt disk</p>			
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>													
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>													
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>													
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>													
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar</p>													
eSATA port	None													
EIDE controller	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC® SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>													
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>													
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models)</p>													
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>													
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>													
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>													
Speaker	<p>One internal speaker for business audio</p>													
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM, PCIe x1, Wake on LAN<sup>®</sup>, ASF2.0</p>													
Intel AMT	None													
Modem	None													
Security chip	<p>Winbond<sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>													
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>													
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>													
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs, 80% PSU</p>													
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® Vista® Business Edition (32-bit)</p>													
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD±RW)</li> </ul>													
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 2600 XT 512MB 43R1963</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 43R1766</li> <li>NVIDIA Quadro 512MB FX 1700 43R1767</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>													
												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
												<p>Supports ThinkVantage® technologies</p>		
												<p>EPEAT™ Gold rating                  ENERGY STAR 4.0-compliant                  RoHS-compliant</p>		
												<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

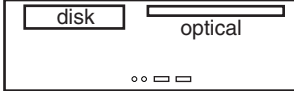
See footnotes for important warranty information  
 US models announced September 18 or December 4, 2007  
 US models withdrawn effective January 2009

# ThinkCentre® M57p Ultra Small (9071) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	eSATA port	Intel vPro	Floor stand	Vista preload	Vista logo	Global Educ	Avail date
<b>M57p</b>	9071-ABU	1x2	Core 2 Duo E6550	2.33	4MB	1GB	80GB <sup>2</sup>	Combo	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07
<b>M57p</b>	9071-A8U	1x2	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	eSATA	vPro		Bus32	Basic	Gbl	Oct 07
<b>M57p</b>	9071-AAU	1x2	Core 2 Duo E6550	2.33	4MB	1GB	160GB	Combo	GMA	eSATA	vPro	Stand	Bus32	Premium		Oct 07
<b>M57p</b>	9071-A2U	1x2	Core 2 Duo E6750	2.66	4MB	1GB	160GB	DVD±RW	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07
<b>M57p</b>	9071-ANU	1x2	Core 2 Duo E6750	2.66	4MB	2GB	160GB	DVD±RW	GMA	eSATA	vPro	Stand	Bus32	Premium		Feb 08

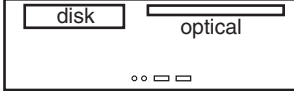
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning	<i>Ultimate enterprise stability and manageability for large enterprise</i>		<b>Ultra Small</b>																																																																				
Processor	<b>Intel® Core™ 2 Duo Processor E6550 or E6750 with dual-core,</b> Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket																																																																						
Implementation	Processor in FC-LGA6 package in LGA775 socket		Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② 5.25", *.5" high, access, std optical (notebook) * Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)																																																																				
Memory	<b>1GB or 2GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available																																																																						
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector		Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)  <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.9" W X 10.7" D X 3.5" H</li> <li>• 276mm W X 273mm D X 89mm H</li> <li>• 14.1 lb (6.4 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some:</i> system floor stand for vertical orientation</li> </ul>																																																																				
SATA disk	<b>80GB or 160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO One SATA cable (1-drop to disk), one SATA connector on planar One external SATA (eSATA) port EIDE Combo <i>Some:</i> 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo Drive, Ultrabay Enhanced (12.7mm high)																																																																						
SATA controller	Enhanced IDE, ATA-133, via EIDE bridge Silicon Image™ SIL3811 from ICH9DO		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable)                      - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>																																																																				
SATA cables	One cable (one 1-drop Ultrabay Enhanced cable to optical), one EIDE connector (Ultrabay Enhanced) on systemboard																																																																						
eSATA port	None		Supports ThinkVantage® technologies  RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																																																				
EIDE Combo	<i>Some:</i> Multi-Burner DL DVD±RW Drive, Ultrabay Enhanced (12.7mm high)																																																																						
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Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																																						
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Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																																																																						
Power supply	225 watts with variable speed fan, autosensing, two diagnostic LEDs																																																																						
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See footnotes for important warranty information  
 US models announced September 18, 2007 or February 5, 2008  
 US models withdrawn effective January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>M57p</b>	9071-AGU	1x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB <sup>2</sup>	Combo	GMA	eSATA	vPro	XP Pro	3-yr	None	Feb 08
<b>M57p</b>	9071-AFU	1x2	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	vPro	Business <sup>32</sup>	3-yr	None	Feb 08

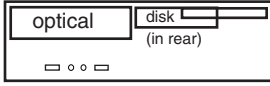
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate enterprise stability and manageability for large enterprise</i> <b>Intel® Core™ 2 Duo Processor E8200</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket		<b>Ultra Small</b>																																																					
Implementation			Bay ① 3.5", 1" high, no access, std disk (desktop)	Bay ② 5.25", *.5 high", access, std optical (notebook)																																																				
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		* Optical bay is Ultrabay™ Enhanced 12.7mm high (uses select ThinkPad-based Ultrabay Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high] devices)																																																					
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector		Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)																																																					
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.9" W X 10.7" D X 3.5" H</li> <li>• 276mm W X 273mm D X 89mm H</li> <li>• 14.1 lb (6.4 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>																																																					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO																																																							
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EIDE Combo	24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo Drive, Ultrabay Enhanced (12.7mm high)																																																							
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Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations)<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																					
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 US models withdrawn effective January 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
M57p	9967-A1U	2x3	Core 2 Duo E8400	3.00	6MB	1GB	160GB <sup>2</sup>	DVD	GMA	eSATA	vPro	XP Pro	3-yr	None	Jun 08
M57p	9967-A2U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	eSATA	vPro	XP Pro	3-yr	None	Jun 08
M57p	9967-A3U	2x3	Core 2 Quad Q9300	2.50	6MB	2GB	160GB	DVD±RW	GMA	eSATA	vPro	XP Pro	3-yr	None	Jun 08
M57p	9967-A4U	2x3	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	eSATA	vPro	Bus32	3-yr	None	Sep 08
M57p	9967-A5U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	eSATA	vPro	Bus32	3-yr	None	Sep 08

• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)  
 • These small and medium business (SMB) models are part of the US TopSeller™ Program  
 • These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Ultimate stability and manageability for small/medium businesses</i></p> <p><b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300</b> with quad-core (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache</p> <p>Processor in FC-LGA8 package in LGA775 socket</p>	<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation	Processor in FC-LGA8 package in LGA775 socket	
Memory	<p><b>1GB</b> or <b>2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>	
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>	
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>	
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>	
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)</p>	
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA Drive (41N5620)</p>	
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors</p>	
eSATA port	<p>One external SATA (eSATA) port</p>	
EIDE controller	<p>None</p>	
Diskette drive	<p>None</p>	
Media reader	<p>None</p>	
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express<sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC<sup>®</sup> SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>	
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>	
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA</p>	
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>	
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>	
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>	
Speaker	<p>One internal speaker for business audio</p>	
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN<sup>®</sup>, ASF2.0</p>	
Intel AMT	<p>Intel Active Management Technology (iAMT)</p>	
Modem	<p>None</p>	
Security chip	<p>Winbond<sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>	<p>Supports ThinkVantage<sup>®</sup> technologies</p>
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>	<p>RoHS-compliant</p>
Power supply	<p>280 watts with variable speed fan, autosenesing, two diagnostic LEDs</p>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- <i>Some:</i> Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</li> <li>- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)</li> <li>✦ <i>Vista models:</i> Vista Premium logo</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>ThinkVision<sup>®</sup> L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• Norton Internet Security™</li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (DVD, DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW) (XP)</li> </ul>	

See footnotes for important warranty information  
 US models announced June 24 or August 19, 2008  
 US models withdrawn effective March 2009

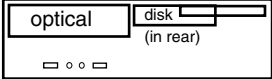
# ThinkCentre® M57p Small (6073) - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Floor stand	Preload	Vista logo	Global Educ	Avail date
M57p	6073-BLU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB <sup>2</sup>	Combo	GMA	eSATA	vPro	Stand	XP Pro		Gbl	Dec 07
M57p	6073-ABU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07
M57p	6073-ATU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	eSATA	vPro	Stand	Bus32	Basic	Gbl	Oct 07
M57p	6073-ADU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	eSATA	vPro	Stand	Bus32	Basic	Gbl	Oct 07
M57p	6073-AKU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD	GMA	eSATA	vPro	Stand	Bus32	Prem		Oct 07
M57p	6073-AMU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	Combo	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07
M57p	6073-BMU	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	eSATA	vPro	Stand	Bus32	Basic	Gbl	Dec 07
M57p	6073-ASU	2x3	Core 2 Duo E6750	2.66	4MB	1GB	160GB	Combo	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07
M57p	6073-A2U	2x3	Core 2 Duo E6750	2.66	4MB	1GB	160GB	DVD±RW	GMA	eSATA	vPro	Stand	Bus32	Basic		Oct 07

• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)

Positioning	<i>Ultimate enterprise stability and manageability for large enterprise</i>		<b>Small</b>	
Processor	<b>Intel® Core™ 2 Duo Processor E6550 or E6750 with dual-core,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket			
Implementation	<b>1GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, std (reader/diskette)	
Memory	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 (5v)	
Graphics	<b>80GB or 160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618) <i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA Drive (41N5620)		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• <i>Some:</i> system floor stand for vertical orientation</li> </ul>	
SATA disk	Two SATA cables (each 1-drop to device), two SATA connectors		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
SATA controller	One external SATA (eSATA) port			
SATA DVD	None			
SATA Combo	None			
SATA DVD±RW	None			
SATA cables	None			
eSATA port	None			
EIDE controller	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q35 Express Chipset;</b> I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN®, ASF2.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- <i>Some:</i> Microsoft® Windows® XP Professional with Vista® COA	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984		
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985		
	1GB PC2-6400 NP DDR2 UDIMM	41U2977		
	2GB PC2-6400 NP DDR2 UDIMM	41U2978		
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015		
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	USB 2.0 Lenovo Multimedia Headset	40Y8518		
	USB 2.0 Lenovo Webcam	40Y8519		
	USB 2.0 Essential Memory Key 32GB	45K1258		
	USB 2.0 Ultra Secure Memory Key 8GB	45J5918		
	USB 2.0 Portable 160GB Hard Disk	43R1784		
	USB 2.0 Portable Secure 320GB Hard Disk	43R2019		
	ThinkVision® L1940p Wide 19" Monitor	4424HB6		
	ThinkVision L2240p Wide 22" Monitor	4422HB6		
	ThinkVision L2440p Wide 24" Monitor	4420HB2		
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		
	Kensington Cable Lock from Lenovo	73P2582		
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961		
	ATI Radeon HD 2400 XT 256MB	43R1962		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
 US models announced September 18 or December 4, 2007  
 US models withdrawn effective January 2009

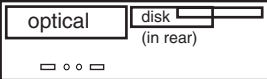
Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Key-board	Preload	Global Educ	Avail date	
<b>M57p</b>	6073-B3U	2x3	Core 2 Duo E8200	2.66	6MB	1GB	160GB <sup>2</sup>	Combo	GMA	eSATA	vPro	Pref	XP Pro		Feb 08	
<b>M57p</b>	6073-D3U	2x3	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	eSATA	vPro	Pref	XP Pro		Sep 08	
<b>M57p</b>	6073-D2U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA+ADD2	eSATA	vPro	Pref	XP Pro		Sep 08	
<b>M57p</b>	6073-D4U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	250GB	DVD±RW	GMA	eSATA	vPro	Pref	XP Pro		Sep 08	
<b>M57p</b>	6073-D6U	2x3	Core 2 Duo E8400	3.00	6MB	2GB	250GB	DVD±RW	GMA+ADD2	eSATA	vPro	Finger	XP Pro		Sep 08	
<b>M57p</b>	6073-D5U	2x3	Core 2 Quad Q9300	2.50	6MB	2GB	250GB	DVD±RW	GMA+ADD2	eSATA	vPro	Pref	XP Pro		Sep 08	
<b>M57p</b>	6073-B2U	2x3	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	vPro	Pref	Bus32		Feb 08	
<b>M57p</b>	6073-BUU	2x3	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	eSATA	vPro	Pref	Bus32	Educ	Apr 08	
<ul style="list-style-type: none"> <li>• Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)</li> <li>• These models have a 3-year limited warranty<sup>1</sup></li> </ul>																
Positioning Processor	<p><i>Ultimate enterprise stability and manageability for large enterprise</i>  <b>Intel® Core™ 2 Duo Processor E8200 or E8400 with dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300 with quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache                      Processor in FC-LGA8 package in LGA775 socket</p>									<p><b>Small</b></p> 		<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Bay ③ 3.5", .5" high, access, open (reader/diskette)</p>				
Implementation	<p>Processor in FC-LGA8 package in LGA775 socket</p>									<p>Slot 1: Low Profile, PCI Express x16 (35w max)*                      Slot 2: Low Profile, 32-bit PCI 2.3 (5v)</p>		<p>* used in some models</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>				
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>															
Graphics	<p>All: <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector                      Some: <b>ADD2 DVI-D Monitor Connection (HDCP)</b>, PCI Express® adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant</p>															
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>															
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>															
SATA DVD	<p>Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)</p>															
SATA Combo	<p>Some: CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>															
SATA DVD±RW	<p>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>															
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors</p>															
eSATA port	<p>One external SATA (eSATA) port</p>															
EIDE controller	<p>None</p>															
Diskette drive	<p>None</p>															
Media reader	<p>None</p>															
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>															
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>															
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15, DVI-D in some models), eSATA</p>															
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>															
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>															
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>															
Speaker	<p>One internal speaker for business audio</p>															
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN®, ASF2.0</p>															
Intel AMT	<p>Intel Active Management Technology (iAMT)</p>															
Modem	<p>None</p>															
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>											<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>				
Keyboard	<p>[Finger] Lenovo® USB Fingerprint Keyboard (USB connector), black</p>											<p>Supports ThinkVantage® technologies</p>				
(one of following)	<p>[Pref] Preferred Pro USB Keyboard (USB connector), 104-key, black</p>											<p>RoHS-compliant</p>				
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>															
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>															
<b>Preloaded operating system<sup>20</sup></b>			<b>Accessories</b>													
- Some: Microsoft® Windows® XP Professional with Vista® COA			1GB PC2-5300 CL5 NP DDR2 UDIMM			73P4984										
- Some: Microsoft Windows Vista Business Edition (32-bit)			2GB PC2-5300 CL5 NP DDR2 UDIMM			73P4985										
✦ Vista models: Vista Basic logo			1GB PC2-6400 NP DDR2 UDIMM			41U2977										
			2GB PC2-6400 NP DDR2 UDIMM			41U2978										
			500GB SATA 3.0Gb/s Disk (7200 rpm)			43R1990										
			USB 2.0 Lenovo Multimedia Headset			40Y8518										
			USB 2.0 Lenovo Webcam			40Y8519										
			USB 2.0 Ultra Secure Memory Key 8GB			45J5918										
			USB 2.0 Portable Secure 320GB Hard Disk			43R2019										
			ThinkVision® L2440p Wide 24" Monitor			4420HB2										
			Wireless Kbd & Opt Wheel Mouse (via USB)			73P4067										
			Kensington Cable Lock from Lenovo			73P2582										
			ADD2 DVI-D Monitor Connection (HDCP)			43R1985										
			ATI™ Radeon™ HD 2400 Pro 128MB			43R1961										
			ATI Radeon HD 2400 XT 256MB			43R1962										
• Rescue and Recovery™			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>➤ 3-year parts and labor</li> <li>➤ International Warranty Service<sup>9</sup></li> <li>➤ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>➤ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>➤ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>➤ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>													

See footnotes for important warranty information  
 US models announced January 22, March 25, or August 19, 2008  
 US models withdrawn effective January or March 2009



# ThinkCentre® M57p Small (9196) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	eSATA port	ENERGY STAR 4.0	Intel vPro	Vista preload	Vista logo	Global Educ	Avail date	
<b>M57p</b>	9196-A1U	2x3	Core 2 Duo E6550	2.33	4MB	1GB	160GB <sup>2</sup>	Combo	GMA	eSATA	ES40	vPro	Bus32	Basic	None	Nov 07	
<ul style="list-style-type: none"> <li>• <b>Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)</b></li> <li>• <b>This model has a 3-year limited warranty<sup>1</sup></b></li> </ul>																	
Positioning	<i>Ultimate enterprise stability and manageability for large enterprise</i>										<b>Small</b>						
Processor	<b>Intel® Core™ 2 Duo Processor E6550</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket																
Implementation	<b>1GB std, 8GB max<sup>a</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available																
Memory	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter																
Graphics	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), two SATA connectors One external SATA (eSATA) port None None None None												Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette) Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 (5v) <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 13.4" D X 3.9" H</li> <li>• 317mm W X 341mm D X 99mm H</li> <li>• 16.4 lb (7.4 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>				
SATA disk	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)												<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• eSATA port disablement</li> </ul>				
SATA controller																	
SATA Combo																	
SATA cables																	
eSATA port																	
EIDE controller																	
Diskette drive																	
Media reader																	
Chipset																	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15), eSATA																
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																
Speaker	One internal speaker for business audio																
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN®, ASF2.0																
Intel AMT	Intel Active Management Technology (iAMT)																
Modem	None																
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo												Supports ThinkVantage® technologies				
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs, 80% PSU												EPEAT™ Gold rating ENERGY STAR 4.0-compliant RoHS-compliant				
<b>Preloaded operating system<sup>20</sup></b>			<b>Accessories</b>														
- Microsoft® Windows® Vista® Business Edition (32-bit)			1GB PC2-5300 CL5 NP DDR2 UDIMM			73P4984											
			2GB PC2-5300 CL5 NP DDR2 UDIMM			73P4985											
<b>Preloaded applications<sup>5</sup></b>			1GB PC2-6400 NP DDR2 UDIMM			41U2977											
• Rescue and Recovery™			2GB PC2-6400 NP DDR2 UDIMM			41U2978											
• Client Security Solution™			250GB SATA 3.0Gb/s Disk (7200 rpm)			41N3015											
• ThinkVantage Productivity Center			500GB SATA 3.0Gb/s Disk (7200 rpm)			43R1990											
• ThinkVantage System Update			USB Portable Diskette Drive			05K9276											
• System Migration Assistant			USB 2.0 Lenovo Multimedia Headset			40Y8518											
• Norton Internet Security™ (90 days of virus definitions)			USB 2.0 Lenovo Webcam			40Y8519											
• Diskeeper® Home			USB 2.0 Essential Memory Key 32GB			45K1258											
• PC-Doctor™ (diagnostics)			USB 2.0 Ultra Secure Memory Key 4GB			45J5917											
• Adobe® Reader			USB 2.0 Ultra Secure Memory Key 8GB			45J5918											
• Windows Live™ Toolbar			USB 2.0 Portable 160GB Hard Disk			43R1784											
• Windows Live Search			USB 2.0 Portable Secure 320GB Hard Disk			43R2019											
• Picasa from Google			USB 2.0 Super Multi-Burner Drive			41N5565											
• Microsoft Office 2007 Trial (60-day)			Super Multi-Burner DL DVD±RW SATA Drive			41N5620											
• Sonic RecordNow and Drive Letter Access (combo)			ThinkVision® L1700p 17" Monitor			9417HE2											
• Corel® WinDVD® (combo)			ThinkVision L1940p Wide 19" Monitor			4424HB6											
			ThinkVision L2240p Wide 22" Monitor			4422HB6											
			ThinkVision L2440p Wide 24" Monitor			4420HB2											
			Wireless Kbd & Opt Wheel Mouse (via USB)			73P4067											
			Laser Tilt Wheel Mouse (USB, PS/2)			41U3074											
			Kensington Cable Lock from Lenovo			73P2582											
			ADD2 DVI-D Monitor Connection (HDCP)			43R1985											
			ATI™ Radeon™ HD 2400 Pro 128MB			43R1961											
			ATI Radeon HD 2400 XT 256MB			43R1962											
			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>														
			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>														
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																	

See footnotes for important warranty information  
 US model announced September 18, 2007  
 US model withdrawn effective January 2009

# ThinkCentre® M57p Tower (9979) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Vista logo	Global Educ	Avail date
<b>M57p</b>	9979-A1U	4x5	Core 2 Duo E8400	3.00	6MB	2GB	160GB <sup>2</sup>	DVD±RW	GMA	None	vPro	XP Pro		None	Jun 08
<b>M57p</b>	9979-A2U	4x5	Core 2 Quad Q9300	2.50	6MB	2GB	160GB	DVD±RW	GMA	None	vPro	XP Pro		None	Jun 08
<b>M57p</b>	9979-A3U	4x5	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA	None	vPro	Bus32	Premium	None	Sep 08

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate stability and manageability for small/medium businesses</i></p> <p><b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300</b> with <b>quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																													
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p> <p>Bay ⑤ 3.5", 1" high, no access, opt disk</p>																																													
Memory	<p><b>2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCI Express x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>																																													
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>																																															
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																																															
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>																																															
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>																																															
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar</p>																																															
eSATA port	None																																															
EIDE controller	None																																															
Diskette drive	None																																															
Media reader	None																																															
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express<sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC<sup>®</sup> SCH5617</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>																																															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																															
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																																															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																																															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																																															
Speaker	One internal speaker for business audio																																															
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN <sup>®</sup> , ASF2.0																																															
Intel AMT	Intel Active Management Technology (iAMT)																																															
Modem	None																																															
Security chip	Winbond <sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																																												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			Supports ThinkVantage <sup>®</sup> technologies																																												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			RoHS-compliant																																												
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																												
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some:</i> Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA</p> <p>- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)</p>		<p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>ThinkVision<sup>®</sup> L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI™ Radeon™ HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> <tr><td>NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB FX 370</td><td>43R1766</td></tr> <tr><td>NVIDIA Quadro 512MB FX 1700</td><td>43R1767</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ThinkVision <sup>®</sup> L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370	43R1766	NVIDIA Quadro 512MB FX 1700	43R1767	
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See footnotes for important warranty information  
US models announced June 24 or August 19, 2008  
US models withdrawn effective March 2009

# ThinkCentre® M57p Tower (9088) - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Vista logo	Global Educ	Avail date
M57p	9088-BEU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB <sup>2</sup>	Combo	GMA	None	vPro	XP Pro		Gbl	Dec 07
M57p	9088-BFU	4x5	Core 2 Duo E6750	2.66	4MB	1GB	160GB	Combo	GMA	None	vPro	XP Pro		Gbl	Dec 07
M57p	9088-B2U	4x5	Core 2 Quad Q6600	2.40	8MB	2GB	160GB	Combo	GMA	None	vPro	XP Pro			Dec 07
M57p	9088-ACU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	None	vPro	Bus32	Basic		Oct 07
M57p	9088-ARU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	DVD	GMA	None	vPro	Bus32	Basic	Gbl	Oct 07
M57p	9088-AEU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	80GB	Combo	GMA	None	vPro	Bus32	Basic	Gbl	Oct 07
M57p	9088-A5U	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD	GMA	None	vPro	Bus32	Premium		Oct 07
M57p	9088-AKU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB	Combo	GMA	None	vPro	Bus32	Basic		Oct 07
M57p	9088-BGU	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB	DVD±RW	GMA	None	vPro	Bus32	Basic	Gbl	Dec 07
M57p	9088-APU	4x5	Core 2 Duo E6750	2.66	4MB	1GB	160GB	Combo	GMA	None	vPro	Bus32	Basic		Oct 07
M57p	9088-A2U	4x5	Core 2 Duo E6750	2.66	4MB	1GB	160GB	DVD±RW	GMA	None	vPro	Bus32	Basic		Oct 07
M57p	9088-B3U	4x5	Core 2 Quad Q6600	2.40	8MB	2GB	160GB	Combo	GMA	None	vPro	Bus32	Premium		Dec 07

• **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**

Positioning Processor	<p><i>Ultimate enterprise stability and manageability for large enterprise</i>  <b>Intel® Core™ 2 Duo Processor E6550 or E6750 with dual-core</b>, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache or <b>Intel Core 2 Quad Processor Q6600 with quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with 8MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation	<p>Processor in FC-LGA6 package in LGA775 socket</p>		<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk                  Bay ⑤ 3.5", 1" high, no access, opt disk</p>	
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>	
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>			
SATA disk	<p><b>80GB or 160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>			
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support</p>			
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive (41N5618)</p>			
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>			
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p>			
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar</p>			
eSATA port	<p>None</p>			
EIDE controller	<p>None</p>			
Diskette drive	<p>None</p>			
Media reader	<p>None</p>			
Chipset	<p><b>Intel Q35 Express Chipset</b>; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express<sup>®</sup> x1, ethernet (MAC), PCI 2.3, USB, LPC bus / <b>SMSC<sup>®</sup> SCH5617 Super I/O</b> for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>			
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>			
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p>			
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>			
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>			
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>			
Speaker	<p>One internal speaker for business audio</p>			
Ethernet	<p>Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN<sup>®</sup>, ASF2.0</p>			
Intel AMT	<p>Intel Active Management Technology (iAMT)</p>			
Modem	<p>None</p>			
Security chip	<p>Winbond<sup>®</sup> WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>			
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>			
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>			
Power supply	<p>280 watts with variable speed fan, manual switch, two diagnostic LEDs</p>			
<b>Preloaded operating system<sup>20</sup></b>	<p><i>- Some:</i> Microsoft<sup>®</sup> Windows<sup>®</sup> XP Professional with Vista<sup>®</sup> COA  <i>- Some:</i> Microsoft Windows Vista Business Edition (32-bit)</p>			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• Norton Internet Security™</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (combo, DVD, DVD±RW)</li> </ul>			
<b>Accessories</b>	<p>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984                  2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985                  1GB PC2-6400 NP DDR2 UDIMM 41U2977                  2GB PC2-6400 NP DDR2 UDIMM 41U2978                  USB 2.0 Ultra Secure Memory Key 8GB 45J5918                  ThinkVision<sup>®</sup> L2440p Wide 24" Monitor 4420HB2                  ADD2 DVI-D Monitor Connection (HDCP) 43R1985                  ATI™ Radeon™ HD 2400 Pro 128MB 43R1961                  ATI Radeon HD 2400 XT 256MB 43R1962                  ATI Radeon HD 2600 XT 512MB 43R1963                  NVIDIA<sup>®</sup> Quadro<sup>®</sup> 256MB NVS 290 43R1765                  NVIDIA Quadro 256MB FX 370 43R1766                  NVIDIA Quadro 512MB FX 1700 43R1767                  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
			<p>Supports ThinkVantage<sup>®</sup> technologies</p>	
			<p>RoHS-compliant</p>	
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced September 18 or December 4, 2007  
 US models withdrawn effective January 2009

# ThinkCentre® M57p Tower (9088) - January 2008 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	Intel vPro	Preload	Global Educ	Avail date
<b>M57p</b>	9088-B1U	4x5	Core 2 Duo E8200	2.66	6MB	1GB	160GB <sup>2</sup>	Combo	GMA	None	vPro	XP Pro		Feb 08
<b>M57p</b>	9088-D6U	4x5	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD	GMA	None	vPro	XP Pro		Sep 08
<b>M57p</b>	9088-D4U	4x5	Core 2 Duo E8400	3.00	6MB	2GB	160GB	DVD±RW	GMA+ADD2	None	vPro	XP Pro		Sep 08
<b>M57p</b>	9088-D5U	4x5	Core 2 Duo E8400	3.00	6MB	2GB	250GB	DVD±RW	<b>2400XT</b>	None	vPro	XP Pro		Sep 08
<b>M57p</b>	9088-D3U	4x5	Core 2 Quad Q9300	2.50	6MB	2GB	160GB	DVD±RW	GMA+ADD2	None	vPro	XP Pro		Sep 08
<b>M57p</b>	9088-AWU	4x5	Core 2 Duo E8200	2.66	6MB	1GB	160GB	Combo	GMA	None	vPro	Business32		Feb 08
<b>M57p</b>	9088-BWU	4x5	Core 2 Duo E8400	3.00	6MB	1GB	160GB	DVD±RW	GMA	None	vPro	Business32	Educ	Apr 08
<ul style="list-style-type: none"> <li>• <b>Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> </ul>														
Positioning Processor	<i>Ultimate enterprise stability and manageability for large enterprise</i> <b>Intel® Core™ 2 Duo Processor E8200 or E8400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, 1333MHz system bus, and 6MB shared L2 cache or <b>Intel Core 2 Quad Processor Q9300</b> with <b>quad-core</b> (dual-core on dual-die), Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA8 package in LGA775 socket								<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	Processor in FC-LGA8 package in LGA775 socket													
Memory	<b>1GB or 2GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available													
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector <i>Some:</i> <b>ADD2 DVI-D Monitor Connection (HDCP)</b> , PCI Express® adapter in PCIe x16 slot, provides DVI-D connector to support second monitor, HDCP-compliant <i>Some:</i> <b>ATI™ Radeon™ HD 2400 XT</b> , PCI Express x16 adapter, 256MB, dual-head support, VGA and DVI-I connectors via dongle, S-Video out for TV-out, HDCP, DirectX® 10, ATI Avivo™, dual-link DVI, 35 watts								Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk Slot 1: half-length, full-height, PCI Express x16 (75w max)* Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)					
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive (41N5618) <i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620) Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar													
SATA controller	None													
SATA DVD	None													
SATA Combo	None													
SATA DVD±RW	None													
SATA cables	None													
eSATA port	None													
EIDE controller	None													
Diskette drive	None													
Media reader	None													
Chipset	<b>Intel Q35 Express Chipset</b> ; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>D5U:</i> monitor (VGA DB-15, DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15, DVI-D in some models)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN®, ASF2.0													
Intel AMT	Intel Active Management Technology (iAMT)													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs													
<b>Preloaded operating system<sup>20</sup></b>				<b>Accessories</b>										
- <i>Some:</i> Microsoft® Windows® XP Professional with Vista® COA				1GB PC2-6400 NP DDR2 UDIMM				41U2977						
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)				2GB PC2-6400 NP DDR2 UDIMM				41U2978						
◇ <i>Vista models:</i> Vista Basic logo				Kensington Cable Lock from Lenovo				73P2582						
<b>Preloaded applications<sup>5</sup></b> (all OSEs; only some listed)				ADD2 DVI-D Monitor Connection (HDCP)				43R1985						
• Rescue and Recovery™				ATI™ Radeon™ HD 2400 Pro 128MB				43R1961						
• Norton Internet Security™				ATI Radeon HD 2400 XT 256MB				43R1962						
• Diskeeper® Home				ATI Radeon HD 2600 XT 512MB				43R1963						
• Microsoft Office 2007 Trial (60-day)				NVIDIA® Quadro® 256MB NVS 290				43R1765						
				NVIDIA Quadro 256MB FX 370				43R1766						
				NVIDIA Quadro 512MB FX 1700				43R1767						
				Other accessories at <b>lenovo.com/accessories</b>										
<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>														
Supports ThinkVantage® technologies														
RoHS-compliant														
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>														

See footnotes for important warranty information  
 US models announced January 22, March 25, or August 19, 2008  
 US models withdrawn effective January or March 2009

# ThinkCentre® M57p Tower (9194) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	eSATA port	ENERGY STAR 4.0	Intel vPro	Vista preload	Vista logo	Global Educ	Avail date
M57p	9194-A1U	4x5	Core 2 Duo E6550	2.33	4MB	1GB	160GB <sup>2</sup>	Combo	GMA	None	ES40	vPro	Bus32	Basic	None	Oct 07

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This model has a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate enterprise stability and manageability for large enterprise										<b>Tower</b>		
Implementation	Intel® Core™ 2 Duo Processor E6550 with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 4MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.0" D X 15.7" H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.5 lb (10.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	1GB std, 8GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets; Non-italics: standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk		
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in Q35, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH9DO, RAID 0/1 support												
SATA Combo	CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA/SATA connector on planar												
eSATA port	None												
EIDE controller	None												
Diskette drive	None												
Media reader	None												
Chipset	Intel Q35 Express Chipset; I/O Controller Hub 9 Digital Office (ICH9DO) for SATA 3.0Gb/s with RAID 0/1 support, PCI Express® x1, ethernet (MAC), PCI 2.3, USB, LPC bus / SMSC® SCH5617 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82566DM (PHY layer; MAC in ICH9DO), PCIe x1, Intel AMT 3.0, Wake on LAN®, ASF2.0												
Intel AMT	Intel Active Management Technology (iAMT)												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo										EPEAT™ Gold rating ENERGY STAR 4.0-compliant RoHS-compliant		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosenesing, two diagnostic LEDs, 80% PSU												
<b>Preloaded operating system</b> <sup>20</sup>	Microsoft® Windows® Vista® Business Edition (32-bit)										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		
<b>Preloaded applications</b> <sup>5</sup>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo)</li> </ul>												
<b>Accessories</b>	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 NVIDIA® Quadro® 256MB NVS 290 43R1765 NVIDIA Quadro 256MB FX 370 43R1766 NVIDIA Quadro 512MB FX 1700 43R1767												
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>												
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												

See footnotes for important warranty information  
 US model announced September 18, 2007  
 US model withdrawn effective January 2009

**Partial list of accessories supported on ThinkCentre M57 and M57p**

**Memory**

M57/M57p Eco Ultra Small 6395/6397 use notebook memory:  
 1GB PC2-5300 DDR2 SODIMM (notebook) 43R1763 ann 03/04/08  
 2GB PC2-5300 DDR2 SODIMM (notebook) 43R1756 ann 03/04/08

M57/M57p Ultra Small 6071/9071,  
 M57/M57p Small 9970/6072/9181/9967/6073/9196, and  
 M57/M57p Tower 9978/6075/9174/9979/9088/9194 use desktop  
 memory:

512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 ann 06/28/05  
 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 ann 06/28/05  
 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 ann 09/26/06  
 512MB PC2-6400 NP DDR2 UDIMM<sup>48</sup> 41U2976 ann 09/26/06  
 1GB PC2-6400 NP DDR2 UDIMM<sup>48</sup> 41U2977 ann 09/26/06  
 2GB PC2-6400 NP DDR2 UDIMM<sup>48</sup> 41U2978 ann 01/08/08

<sup>48</sup>When PC2-6400 is installed with systems that have PC2-5300 memory, PC2-6400 will operate at the PC2-5300 memory speed.

**Optical**

M57/M57p Ultra Small 6071/9071 use  
 Ultrabay™ Enhanced [12.7mm high] and Ultrabay Slim [9.5mm high]  
 EIDE optical drives:  
 CD-RW/DVD Combo Ultrabay Enhanced (cur)<sup>47</sup> 73P3275 ann 10/07/03  
 ThinkPad DVD Ultrabay Slim Burner (flat)<sup>47</sup> 41N5643 ann 05/31/07  
<sup>47</sup>Not supported by Lenovo®

M57/M57p Eco Ultra Small 6395/6397,  
 M57/M57p Small 9970/6072/9181/9967/6073/9196, and  
 M57/M57p Tower 9978/6075/9174/9979/9088/9194  
 support Serial ATA optical drives:  
 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 ann 09/26/06  
 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ann 09/26/06

**Storage and removable storage**

All:  
 80GB SATA 3.0Gb/s Disk (7200 rpm) 09N4253 ann 05/19/03  
 160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254 ann 05/19/03  
 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 ann 01/24/06  
 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 ann 11/06/07

M57/M57p Eco Ultra Small 6395/6397 support:  
 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 ann 08/19/08

All:  
 USB Portable Diskette Drive 05K9276 ann 06/05/00  
 USB 2.0 Essential Memory Key 1GB 41U4940 ann 01/23/07  
 USB 2.0 Essential Memory Key 2GB 41U4944 ann 01/23/07  
 USB 2.0 Essential Memory Key 4GB 45J7904 ann 06/24/08  
 USB 2.0 Essential Memory Key 8GB 45J7905 ann 07/15/08  
 USB 2.0 Essential Memory Key 32GB 45K1258 ann 10/28/08  
 USB 2.0 Security Memory Key 1GB 41U5118 ann 07/17/07  
 USB 2.0 Security Memory Key 2GB 41U5119 ann 07/17/07  
 USB 2.0 Security Memory Key 4GB 41U5120 ann 07/17/07  
 USB 2.0 Ultra Secure Memory Key 1GB 45J5915 ann 08/26/08  
 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 ann 08/26/08  
 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 ann 08/26/08  
 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 ann 08/26/08  
 USB 2.0 Portable 160GB Hard Disk 43R1784 ann 09/23/08  
 USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09  
 USB 2.0 Portable Secure 160GB Hard Disk 43R2018 ann 11/18/08  
 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08  
 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 ann 01/05/06  
 USB 2.0 Super Multi-Burner Drive 41N5565 ann 01/23/07

**Graphics**

M57/M57p Small 9970/6072/9181/9967/6073/9196 support Low Profile  
 35 watts max:  
 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07  
 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ann 11/06/07  
 ATI Radeon HD 2400 XT 256MB 43R1962 ann 11/06/07

M57/M57p Tower 9978/6075/9174/9979/9088/9194 support 75 watts  
 max:  
 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07  
 ATI Radeon HD 2400 Pro 128MB 43R1961 ann 11/06/07  
 ATI Radeon HD 2400 XT 256MB 43R1962 ann 11/06/07  
 ATI Radeon HD 2600 XT 512MB 43R1963 ann 11/06/07  
 NVIDIA® Quadro® 256MB NVS 290 43R1765 ann 12/18/07  
 NVIDIA Quadro 256MB FX 370 43R1766 ann 12/18/07  
 NVIDIA Quadro 512MB FX 1700 43R1767 ann 12/18/07

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard 73P5220 ann 06/21/05  
 Preferred Pro Full Size PS/2 Keyboard 31P7415 ann 06/04/02  
 Enhanced Performance USB Keyboard 73P2620 ann 03/23/04  
 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 ann 12/07/04  
 USB Travel Keyboard with UltraNav™ 31P9490 ann 04/27/04  
 Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Optical Wheel Mouse (USB) 06P4069 ann 05/21/03  
 Optical ScrollPoint® Mouse (USB, PS/2) 31P7405 ann 08/27/02  
 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 ann 01/23/07  
 Lenovo Wireless Laser Mouse (blk, via USB) 45K1696 ann 11/25/08  
 Lenovo Wireless Laser Mouse (red, via USB) 51J0198 ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

USB 2.0 Lenovo Multimedia Headset 40Y8518 ann 06/27/06  
 USB 2.0 Lenovo Webcam 40Y8519 ann 08/29/06

**Security**

Kensington® Cable Lock from Lenovo 73P2582 ann 12/29/03  
 Kensington Twin Head Cable Lock 45K1620 ann 09/30/08  
 USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06

**Mounting Device**

M57/M57p Eco Ultra Small 6395/6397 and M57/M57p Ultra Small  
 6071/9071 support under desk mounting device:  
 ThinkCentre Ultra Small Under Desk Mount 40Y8625 ann 09/06/05

**Monitors**

ThinkVision® L174 17" Monitor 9227AE1 ann 04/15/08  
 ThinkVision L1700p 17" Monitor 9417HE2 ann 09/17/08  
 ThinkVision L1900p 19" Monitor 4431HE1 ann 11/11/08  
 ThinkVision L1940p Wide 19" Monitor 4424HB6 ann 09/17/08  
 ThinkVision L200p Wide 20.1" Monitor 4438HB6 ann 04/15/08  
 ThinkVision L2240p Wide 22" Monitor 4422HB6 ann 09/17/08  
 ThinkVision L2440p Wide 24" Monitor 4420HB2 ann 09/17/08  
 ThinkVision L2440x Wide 24" Monitor 4421HB2 ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

M57/M57p Eco Ultra Small 6395/6397 support:  
 Lenovo Vertical PC and Monitor Stand 41R4359 ann 02/19/08

All:  
 ThinkVision USB Soundbar 40Y7616 ann 08/23/05  
 ThinkVision Soundbar 45K1263 ann 09/16/08  
 Kensington Cable Lock from Lenovo 73P2582 ann 12/29/03  
 Kensington Twin Head Cable Lock 45K1620 ann 09/30/08  
 Radial Arm 19K4464 ann 05/05/00

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

**Medialess License Key (MLK)**

Microsoft® Office 2007 Basic, English 43R1528 ann 01/31/07  
 Microsoft Office 2007 Small Business, Engl 43R1534 ann 01/31/07  
 Microsoft Office 2007 Professional, English 43R1531 ann 01/31/07

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre M58e Small and  
Lenovo ThinkCentre M58e Tower



Lenovo ThinkCentre M58e Small  
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre M58e Small



Lenovo ThinkCentre M58e Small  
with Lenovo ThinkVision monitor



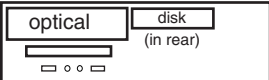
Lenovo ThinkCentre M58e Tower



Lenovo ThinkCentre M58e Tower  
with Lenovo ThinkVision monitor

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
<b>M58e</b>	7259-A2U	2x3	Core 2 Quad Q9400	2.66	6MB	4	2GB	160GB <sup>2</sup>	DVD±RW	GMA	XP Pro	Basic	None	Apr 09

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty<sup>1</sup>

Positioning Processor	Stability and manageability for small and medium businesses <b>Intel® Core™ 2 Quad Processor Q9400</b> with quad-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
- Microsoft® Windows® XP Professional with Vista® COA	1GB PC2-6400 NP DDR2 UDIMM 41U2977			
↕ Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-6400 NP DDR2 UDIMM 41U2978			
<b>Preloaded applications<sup>5</sup></b>	160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254			
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015			
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
• ThinkVantage Productivity Center	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
• McAfee® VirusScan® Plus (30 days of virus definitions)	USB Portable Diskette Drive 05K9276			
• Lenovo System Toolbox	USB 2.0 Lenovo Multimedia Headset 40Y8518			
• Adobe® Reader	USB 2.0 Lenovo Webcam 40Y8519			
• Windows Live™ Toolbar	USB 2.0 Essential Memory Key 32GB 45K1258			
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 8GB 45J5918			
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Portable 320GB Hard Disk 45K1689			
• Roxio® Creator® Business Edition (DVD±RW)	USB 2.0 Portable Secure 320GB Hard Disk 43R2019			
• Roxio MyDVD® (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
• Corel® WinDVD® (DVD±RW)	ThinkVision® L1940p Wide 19" Monitor 4424HB6			
	ThinkVision L2240p Wide 22" Monitor 4422HB6			
	ThinkVision L2440p Wide 24" Monitor 4420HB2			
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067			
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074			
	Kensington Cable Lock from Lenovo 73P2582			
	DisplayPort to Single-link DVI-D Cable 45J7915			
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985			
	ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
 US model announced March 24, 2009  
 US model withdrawn effective April 2009




# ThinkCentre® M58e Small (7259) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
<b>M58e</b>	7259-B1U	2x3	Pentium E6300	2.80	2MB	2	1GB	250GB <sup>2</sup>	DVD	GMA	XP Pro	None	Nov 09
<b>M58e</b>	7259-B2U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB	DVD±RW	GMA	XP Pro	None	Nov 09
<b>M58e</b>	7259-B3U	2x3	Pentium E6300	2.80	2MB	2	3GB	500GB	DVD±RW	GMA	XP Pro	None	Nov 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300 with dual-core,</b> 1066MHz system bus, and 2MB L2 cache Processor in LGA775 socket		<b>Small</b> 
Implementation	Processor in LGA775 socket		
Memory	<b>1GB, 2GB, or 3GB std,</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500),</b> integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB or 3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation
SATA disk	<b>250GB or 500GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • Parallel port I/O control • USB port disablement
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		GREENGUARD® certified RoHS-compliant
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977	<b>Limited Warranty<sup>1</sup></b> ↪ <b>1-year parts and labor</b> ↪ <b>International Warranty Service<sup>9</sup></b> ↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189) • <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187) • <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190) • <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188) • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191) ↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↪ <b>Post warranty maintenance services available</b> ↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	DisplayPort™ to Single-link DVI-D Cable	45J7915	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	More accessories on O-M58E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe® Reader®			
• Windows Live™ Toolbar			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			


See footnotes for important warranty information  
US models announced November 3, 2009  
US models withdrawn effective October 2010

# ThinkCentre® M58e Small (7259) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
M58e	7259-D3U	2x3	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7259-D2U	2x3	Pentium E5400	2.70	2MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7259-D1U	2x3	Pentium E5400	2.70	2MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Jan 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Celeron® Processor E3200</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5400</b> with dual-core, 800MHz system bus, and 2MB L2 cache Processor in LGA775 socket	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB, 2GB, or 3GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosenesing		
			<b>Security</b>
			<ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
			Supports ThinkVantage® technologies
			GREENGUARD® certified RoHS-compliant
			<b>Limited Warranty<sup>1</sup></b>
			<ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• Password Manager	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• ThinkVantage Power Manager	DisplayPort™ to Single-link DVI-D Cable	45J7915	
• ThinkVantage Toolbox	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
• Lenovo Online Data Backup	NVIDIA® Quadro® 256MB NVS 290	43R1765	
• Norton™ Internet Security 2011 (30 days of virus definitions)	More accessories on O-M58E sheet		
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe Flash® Player	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			

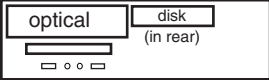
See footnotes for important warranty information  
US models announced December 15, 2009  
US models withdrawn effective December 2010

# ThinkCentre® M58e Small (7269) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
M58e	7269-B6U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	None	None	Apr 09
M58e	7269-B7U	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7269-A9U	2x3	Core 2 Duo E7400	2.80	3MB	2	1GB	160GB	DVD	GMA	XP Pro	None	None	Apr 09
M58e	7269-B1U	2x3	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7269-C2U	2x3	Core 2 Duo E7400	2.80	3MB	2	3GB	250GB	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7269-C4U	2x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7269-C3U	2x3	Core 2 Duo E8400	3.00	6MB	2	3GB	250GB	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7269-B2U	2x3	Core 2 Quad Q8200	2.33	4MB	4	2GB	160GB	DVD±RW	GMA	XP Pro	None	None	Apr 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Stability and manageability for small and medium businesses <b>Intel® Pentium® Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> or <b>E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache <b>Intel Core 2 Quad Processor Q8200</b> with quad-core, 1333MHz system bus, and 4MB L2 cache		Small	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB or 3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB, 250GB, or 320GB</b> , SATA 3.0Gb/s, 7200 rpm, vibration dampening mounts			<h3>Security</h3> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 NP DDR2 UDIMM	41U2977		
	2GB PC2-6400 NP DDR2 UDIMM	41U2978		
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
	USB Portable Diskette Drive	05K9276		
	USB 2.0 Lenovo Multimedia Headset	40Y8518		
	USB 2.0 Lenovo Webcam	40Y8519		
	USB 2.0 Essential Memory Key 32GB	45K1258		
	USB 2.0 Ultra Secure Memory Key 8GB	45J5918		
	USB 2.0 Portable 320GB Hard Disk	45K1689		
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
	ThinkVision® L2440p Wide 24" Monitor	4420HB2		
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074		
	DisplayPort to Single-link DVI-D Cable	45J7915		
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
	ATI™ Radeon™ HD 3070 256MB (DP, VGA)	45K1636		
	NVIDIA® Quadro® 256MB FX 370 LP	55Y9275		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
<b>Preloaded applications<sup>5</sup></b>				
• Rescue and Recovery™				
• Client Security Solution™				
• ThinkVantage Productivity Center				
• McAfee® VirusScan® Plus (30 days of virus definitions)				
• Lenovo System Toolbox				
• Adobe® Reader				
• Windows Live™ Toolbar				
• Windows Live Search				
• Microsoft® Office 2007 Trial (60-day)				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD, DVD±RW)				
			<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
US models announced March 10 or April 7, 2009  
US models withdrawn effective April or August 2009


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# ThinkCentre® M58e Small (7269) - TopSeller (June 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
<b>M58e</b>	7269-C5U	2x3	Pentium E5300	2.60	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	XP Pro	None	Jul 09
<b>M58e</b>	7269-C9U	2x3	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA	XP Pro	None	Jul 09
<b>M58e</b>	7269-D1U	2x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	XP Pro	None	Jul 09
<b>M58e</b>	7269-D2U	2x3	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	DVD±RW	GMA	XP Pro	None	Jul 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b> 
Implementation	Processor in LGA775 package		
Memory	<b>1GB, 2GB, or 3GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)  Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3  • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB or 3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>160GB, 250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • Parallel port I/O control • USB port disablement  Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	DisplayPort to Single-link DVI-D Cable	45J7915	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962	
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	
	NVIDIA® Quadro® 256MB FX 370 LP	55Y9275	
	More accessories on O-M58E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b>			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe® Reader®			
• Windows Live™ Toolbar			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			


See footnotes for important warranty information  
 US models announced June 23 or July 7, 2009  
 US models withdrawn effective November 2009

# ThinkCentre® M58e Small (7269) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chassis intr switch	Preload	Global Educ	Avail date
<b>M58e</b>	7269-E5U	2x3	Pentium E5400	2.70	2MB	2	1GB	250GB <sup>2</sup>	DVD	GMA		XP Pro	None	Jan 10
<b>M58e</b>	7269-D5U	2x3	Pentium E6300	2.80	2MB	2	1GB	250GB	DVD	GMA	Switch	XP Pro	None	Nov 09
<b>M58e</b>	7269-D6U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB	DVD±RW	GMA	Switch	XP Pro	None	Nov 09
<b>M58e</b>	7269-D7U	2x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA		XP Pro	None	Nov 09
<b>M58e</b>	7269-D8U	2x3	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	DVD±RW	GMA		XP Pro	None	Nov 09
<b>M58e</b>	7269-F1U	2x3	Core 2 Quad Q9500	2.83	6MB	4	3GB	500GB	DVD±RW	GMA		XP Pro	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5400</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300</b> with dual-core, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 or Q9500</b> with quad-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3
Implementation		
Memory	<b>1GB, 2GB, or 3GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB or 3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	
SATA disk	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p align="center">Supports ThinkVantage® technologies</p> <p align="center">GREENGUARD® certified RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977
	2GB PC2-6400 DDR2 UDIMM	41U2978
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
	DisplayPort™ to Single-link DVI-D Cable	45J7915
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985
	NVIDIA® Quadro® 256MB NVS 290	43R1765
	More accessories on O-M58E sheet	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>		
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• McAfee® VirusScan® Plus (30 days of virus definitions)		
• Lenovo System Toolbox		
• Adobe® Reader®		
• Windows Live™ Toolbar		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		


See footnotes for important warranty information  
 US models announced November 3, 2009, December 15, 2009, or March 2, 2010  
 US models withdrawn effective January, April, or October 2010

# ThinkCentre® M58e Small (7269) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
M58e	7269-E6U	2x3	Pentium E5400	2.70	2MB	2	1GB	250GB <sup>2</sup>	DVD	GMA	Pro 32	None	Jan 10
M58e	7269-E7U	2x3	Pentium E5400	2.70	2MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7269-E8U	2x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7269-E9U	2x3	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7269-F2U	2x3	Core 2 Quad Q9500	2.83	6MB	4	3GB	500GB	DVD±RW	GMA	Pro 32	None	Mar 10


- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5400 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 or Q9500 with quad-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in LGA775 socket		
Memory	<b>1GB, 2GB, or 3GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [ <i>1GB models</i> ], 765MB [ <i>2GB models</i> ], or 1277MB [ <i>3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM	41U2977	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	2GB PC2-6400 DDR2 UDIMM	41U2978	
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
• Password Manager	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• ThinkVantage Power Manager	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
• ThinkVantage Toolbox	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• Lenovo Online Data Backup	DisplayPort™ to Single-link DVI-D Cable	45J7915	
• Norton™ Internet Security 2011 (30 days of virus definitions)	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
• Adobe® Reader®	NVIDIA® Quadro® 256MB NVS 290	43R1765	
• Adobe Flash® Player	More accessories on O-M58E sheet		
• Skype™ for Windows	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Microsoft Office 2010 preloaded; purchase product key to activate	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			

See footnotes for important warranty information  
US models announced January 12 or March 2, 2010  
US models withdrawn effective April or December 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
M58e	7279-B1U	2x3	Pentium E2220	2.40	1MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7279-A9U	2x3	Core 2 Duo E7300	2.66	3MB	2	2GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7279-A8U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09

- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E2220 with dual-core</b> , 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • Parallel port I/O control • USB port disablement
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosenesing	GREENGUARD® certified RoHS-compliant
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<b>Limited Warranty<sup>1</sup></b> ↪ <b>1-year parts and labor</b> ↪ <b>International Warranty Service<sup>9</sup></b> ↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189) • <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187) • <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190) • <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188) • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191) ↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↪ <b>Post warranty maintenance services available</b> ↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Genuine Windows® Vista® Business 32	1GB PC2-6400 DDR2 UDIMM 41U2977	
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-6400 DDR2 UDIMM 41U2978	
• Rescue and Recovery™	160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254	
• Client Security Solution™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
• ThinkVantage Power Manager	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
• McAfee® VirusScan® Plus (30 days of virus definitions)	DisplayPort to Single-link DVI-D Cable 45J7915	
• Lenovo System Toolbox	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
• Adobe® Reader®	ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636	
• Windows Live™ Toolbar	NVIDIA® Quadro® 256MB FX 370 LP 55Y9275	
• Microsoft® Office 2007 Trial (60-day)	NVIDIA Quadro 256MB NVS 290 43R1765	
• Roxio® Creator® Business Edition (DVD±RW)	More accessories on O-M58E sheet	
• Roxio MyDVD® (DVD±RW)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Corel® WinDVD® (DVD±RW)	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

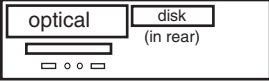
See footnotes for important warranty information  
US models announced March 10, 2009  
US models withdrawn effective June 2009, August 2009, or April 2010

# ThinkCentre® M58e Small (7303) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Floor stand	Preload	Global Educ	Avail date
M58e	7303-F9U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	Stand	XP Pro		Apr 09
M58e	7303-C6U	2x3	Pentium E5300	2.60	2MB	2	1GB	160GB	DVD	GMA	Stand	XP Pro		Apr 09
M58e	7303-G8U	2x3	Pentium E5300	2.60	2MB	2	1GB	160GB	DVD±RW	GMA	Stand	XP Pro	Educ	Apr 09
M58e	7303-C7U	2x3	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-C8U	2x3	Core 2 Duo E7400	2.80	3MB	2	1GB	160GB	DVD	GMA	Stand	XP Pro		Apr 09
M58e	7303-D1U	2x3	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-C9U	2x3	Core 2 Duo E7500	2.93	3MB	2	1GB	160GB	DVD	GMA	Stand	XP Pro		Apr 09
M58e	7303-D2U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-D3U	2x3	Core 2 Duo E8400	3.00	6MB	2	1GB	160GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-D5U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-G7U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro	Educ	Apr 09
M58e	7303-D4U	2x3	Core 2 Duo E8500	3.16	6MB	2	1GB	250GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-D6U	2x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	DVD±RW	GMA	Stand	XP Pro		Apr 09
M58e	7303-G9U	2x3	Core 2 Quad Q8200	2.33	4MB	4	2GB	250GB	DVD±RW	GMA	Stand	XP Pro		Apr 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Essential business features, exceptional value <b>Intel® Pentium® Processor E5200 or E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 or E8500 with dual-core</b> , 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q8200 with quad-core</b> , 1333MHz system bus, and 4MB L2 cache	<b>Small</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	• Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • <i>Some:</i> system floor stand for vertical orientation	
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • Parallel port I/O control • USB port disablement
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM 41U2977		
	2GB PC2-6400 DDR2 UDIMM 41U2978		
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	Super Multi-Burner DL DVD±RW SATA Drive 41N5620		
• <i>Some:</i> Education software	DisplayPort to Single-link DVI-D Cable 45J7915		
- VitalSource Library School Edition	ADD2 DVI-D Monitor Connection (HDCP) 43R1985		
- Adobe® Elements	NVIDIA® Quadro® 256MB NVS 290 43R1765		
- Photoshop Elements 7	More accessories on O-M58E sheet		
- Premiere Elements 7	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Rescue and Recovery™	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Client Security Solution™			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			
			<b>Limited Warranty<sup>1</sup></b> ⇒ 3-year parts and labor ⇒ International Warranty Service <sup>9</sup> ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378

See footnotes for important warranty information  
US models announced March 10 or March 24, 2009  
US models withdrawn effective October 2009, December 2009, or October 2010

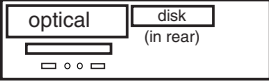


# ThinkCentre® M58e Small (7303) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
M58e	7303-D8U	2x3	Pentium E5300	2.60	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA	Business32	Basic	None	Apr 09
M58e	7303-D9U	2x3	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E1U	2x3	Core 2 Duo E7400	2.80	3MB	2	1GB	160GB	DVD	GMA	Business32	Basic	None	Apr 09
M58e	7303-E3U	2x3	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E2U	2x3	Core 2 Duo E7500	2.93	3MB	2	1GB	160GB	DVD	GMA	Business32	Basic	None	Apr 09
M58e	7303-E4U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E5U	2x3	Core 2 Duo E8400	3.00	6MB	2	1GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E7U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E6U	2x3	Core 2 Duo E8500	3.16	6MB	2	1GB	250GB	DVD±RW	GMA	Business32	Basic	None	Apr 09
M58e	7303-E8U	2x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	DVD±RW	GMA	Business32	Basic	None	Apr 09

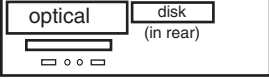
- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>More accessories on O-M58E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
US models announced March 10, 2009  
US models withdrawn effective October, 2009, December 2009, or December 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
M58e	7303-K7U	2x3	Pentium E5300	2.60	2MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	XP Pro		Jul 09
M58e	7303-K9U	2x3	Pentium E5300	2.60	2MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	Educ	Jul 09
M58e	7303-K8U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	DVD±RW	GMA	XP Pro	Educ	Jul 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache			<b>Small</b>								
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket			Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3						
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available			<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>								
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter											
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors											
eSATA port	None											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)					<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>						
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing											
<b>Preloaded operating system</b> <sup>20</sup>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			<b>Accessories</b>		<ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® Quadro® 256MB FX 370 LP 55Y9275</li> <li>More accessories on O-M58E sheet</li> </ul>						
<b>Preloaded applications</b> <sup>5</sup>	<ul style="list-style-type: none"> <li>• Some: Education software</li> <li>- VitalSource Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 7</li> <li>- Premiere Elements 7</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			<ul style="list-style-type: none"> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant  <p><b>Limited Warranty</b><sup>1</sup></p> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>						

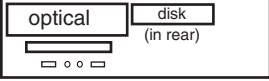
See footnotes for important warranty information  
 US models announced July 7, 2009  
 US models withdrawn effective December 2009

# ThinkCentre® M58e Small (7303) - XP with Win 7 License - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
<b>M58e</b>	7303-R1U	2x3	Pentium E6300	2.80	2MB	2	1GB	250GB <sup>2</sup>	DVD	GMA	XP Pro		Oct 09
<b>M58e</b>	7303-R2U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB	DVD±RW	GMA	XP Pro		Oct 09
<b>M58e</b>	7303-R3U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB	DVD±RW	GMA	XP Pro	Educ	Oct 09
<b>M58e</b>	7303-Q9U	2x3	Core 2 Quad Q8400	2.66	4MB	4	2GB	250GB	DVD±RW	GMA	XP Pro		Oct 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300 with dual-core</b> , Virtualization Technology, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Quad Processor Q8400 with quad-core</b> , Virtualization Technology, 1333MHz system bus, and 4MB L2 cache	<b>Small</b>	
Implementation	Processor in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical-drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		GREENGUARD® certified RoHS-compliant
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b>
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort™ to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58E sheet		↔ <b>3-year parts and labor</b> ↔ <b>International Warranty Service<sup>9</sup></b> ↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↔ <b>Post warranty maintenance services available</b> ↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• <i>Some</i> : Education software			
- VitalSource Library School Edition			
- Adobe® Elements			
- Photoshop Elements 7			
- Premiere Elements 7			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe Reader®			
• Windows Live™ Toolbar			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			

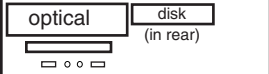
See footnotes for important warranty information  
US models announced October 22, 2009  
US models withdrawn effective December 2009 or October 2010

# ThinkCentre® M58e Small (7303) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
M58e	7303-BAU	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7303-BBU	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7303-BCU	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Jan 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300 with dual-core</b> , 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 with dual-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Small</b> 
Implementation	Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing		Supports ThinkVantage® technologies
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		GREENGUARD® certified RoHS-compliant
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded applications<sup>5</sup></b> (only some listed)	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort™ to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58E sheet		
• Rescue and Recovery™	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Password Manager	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Lenovo Online Data Backup			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			


See footnotes for important warranty information  
 US models announced December 15, 2009  
 US models withdrawn effective December 2010

# ThinkCentre® M58e Small (7506) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Preload	Global Educ	Avail date
<b>M58e</b>	7506-C7U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	DVD	GMA		XP Pro		Apr 09
<b>M58e</b>	7506-B9U	2x3	Pentium E5300	2.60	2MB	2	1GB	160GB	DVD	GMA		XP Pro		Apr 09
<b>M58e</b>	7506-C1U	2x3	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	DVD±RW	GMA	ES50	XP Pro		Apr 09
<b>M58e</b>	7506-C2U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	ES50	XP Pro		Apr 09
<b>M58e</b>	7506-C9U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	ES50	XP Pro	Educ	Apr 09


- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5200 or E5300</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>1GB</b> or <b>2GB</b> std, 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	Supports ThinkVantage® technologies
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	Climate Savers®-compliant <i>Some</i> : EPEAT™ Gold rating <i>Some</i> : ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
eSATA port	None	
Diskette drive	None	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosenensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM 41U2977	
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-6400 DDR2 UDIMM 41U2978	
• <i>Some</i> : Education software	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	
- VitalSource Library School Edition	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
- Adobe® Elements	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
- Photoshop Elements 7	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618	
- Premiere Elements 7	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
• Rescue and Recovery™	DisplayPort to Single-link DVI-D Cable 45J7915	
• Client Security Solution™	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
• ThinkVantage Productivity Center	NVIDIA® Quadro® 256MB NVS 290 43R1765	
• ThinkVantage System Update	More accessories on O-M58E sheet	
• McAfee® VirusScan® Plus (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Lenovo System Toolbox	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Adobe Reader®		
• Windows Live™ Toolbar		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information  
 US models announced March 10 or March 24, 2009  
 US models withdrawn effective June, October, or December 2009 or October 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Preload	Global Educ	Avail date
M58e	7506-M2U	2x3	Pentium E5300	2.60	2MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	ES50	XP Pro	None	Jul 09
M58e	7506-M1U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	DVD±RW	GMA	ES50	XP Pro	None	Jul 09

- These models have a 3-year limited warranty<sup>1</sup>

Positioning	<i>Essential business features, exceptional value</i>		<b>Small</b>			
Processor	<b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Implementation	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>			
Memory						
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter					
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH7 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), two SATA connectors eSATA port None Diskette drive None Media reader None					
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)				<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec					
Speaker	One internal speaker for business audio					
IEEE 1394	None					
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®					
Intel AMT	None					
Modem	None					
Security chip	None					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo					
Power supply	280 watts with variable speed fan, autosensing, 85% PSU					
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		<b>Accessories</b>		1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>				Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
					<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

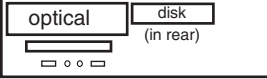
See footnotes for important warranty information  
 US models announced July 7, 2009  
 US models withdrawn effective October 2010

# ThinkCentre® M58e Small (7506) - ES 5.0 (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Preload	Global Educ	Avail date
<b>M58e</b>	7506-N6U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	ES50	XP Pro	None	Oct 09

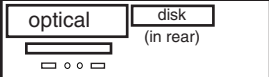
- *This model has a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300</b> with dual-core, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache		<b>Small</b>																											
Implementation	Processor in LGA775 socket																													
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)																											
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3																											
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																													
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors																													
eSATA port	None																													
Diskette drive	None																													
Media reader	None																													
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																													
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																													
Speaker	One internal speaker for business audio																													
IEEE 1394	None																													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																													
Intel AMT	None																													
Modem	None																													
Security chip	None																													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies																											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant																											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU																													
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</td> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td></td> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td></td> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>DisplayPort™ to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td></td> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td></td> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> </table> More accessories on O-M58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977		2GB PC2-6400 DDR2 UDIMM	41U2978		250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		DisplayPort™ to Single-link DVI-D Cable	45J7915		ADD2 DVI-D Monitor Connection (HDCP)	43R1985		NVIDIA® Quadro® 256MB NVS 290	43R1765	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977																												
	2GB PC2-6400 DDR2 UDIMM	41U2978																												
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015																												
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	Super Multi-Burner DL DVD±RW SATA Drive	41N5620																												
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	ADD2 DVI-D Monitor Connection (HDCP)	43R1985																												
	NVIDIA® Quadro® 256MB NVS 290	43R1765																												

See footnotes for important warranty information  
 US model announced October 22, 2009  
 US model withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Global (G) GMP (P)	Avail date
M58e	7408-A1U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	Business32	Basic	G P	Apr 09

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing			
<b>Preloaded operating system<sup>20</sup></b>			Supports ThinkVantage® technologies	
- Genuine Windows® Vista® Business 32			GREENGUARD® certified RoHS-compliant	
<b>Preloaded applications<sup>5</sup></b>			<b>Limited Warranty<sup>1</sup></b>	
<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>				
<b>Accessories</b>				
1GB PC2-6400 DDR2 UDIMM 41U2977				
2GB PC2-6400 DDR2 UDIMM 41U2978				
250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015				
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990				
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918				
Super Multi-Burner DL DVD±RW SATA Drive 41N5620				
DisplayPort to Single-link DVI-D Cable 45J7915				
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NVIDIA® Quadro® 256MB NVS 290 43R1765				
More accessories on O-M58E sheet				
Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>				
Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				
<ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>				

See footnotes for important warranty information  
 US model announced March 10, 2009  
 US model withdrawn effective December 2010

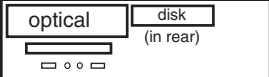


# ThinkCentre® M58e Small (7408) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global (G) GMP (P)	Avail date
<b>M58e</b>	7408-A2U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	320GB <sup>2</sup>	DVD±RW	GMA	Pro 32	G P	Oct 09

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

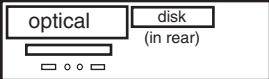
Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3	
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage® technologies	
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM	41U2977	GREENGUARD® certified RoHS-compliant	
	2GB PC2-6400 DDR2 UDIMM	41U2978		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
• Password Manager	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
• ThinkVantage Power Manager	DisplayPort™ to Single-link DVI-D Cable	45J7915		
• ThinkVantage Toolbox	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
• Lenovo Online Data Backup	NVIDIA® Quadro® 256MB NVS 290	43R1765		
• Norton™ Internet Security 2011 (30 days of virus definitions)	More accessories on O-M58E sheet			
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Adobe Flash® Player	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

See footnotes for important warranty information  
 US model announced October 22, 2009  
 US model withdrawn effective December 2010

**ThinkCentre® M58e Small (7514) - ENERGY STAR® 5.0 (GMP) - withdrawn** *Personal Systems Reference (PSREF)*

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Vista preload	Vista logo	Global (G) GMP (P)	Avail date
<b>M58e</b>	7514-A2U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	ES50	Bus32	Basic	G P	Apr 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Small</b>																						
Implementation	Processor in FC-LGA8 package in LGA775 socket																																
Memory	<b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3																						
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> </ul>																						
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies																						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																																
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																																
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors																																
eSATA port	None																																
Diskette drive	None																																
Media reader	None																																
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																																
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Speaker	One internal speaker for business audio																																
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<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32																																
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>										<b>Accessories</b> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> </table> More accessories on O-M58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>					1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® Quadro® 256MB NVS 290	43R1765
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500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																																
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																																
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																																
DisplayPort to Single-link DVI-D Cable	45J7915																																
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																																
NVIDIA® Quadro® 256MB NVS 290	43R1765																																
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																	

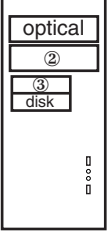
See footnotes for important warranty information  
 US model announced March 10, 2009  
 US model withdrawn effective December 2010

# ThinkCentre® M58e Tower (7258) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
<b>M58e</b>	7258-B1U	4x4	Pentium E6300	2.80	2MB	2	1GB	250GB <sup>2</sup>	None	DVD	GMA	XP Pro	None	Nov 09
<b>M58e</b>	7258-B2U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	None	Nov 09
<b>M58e</b>	7258-B3U	4x4	Pentium E6300	2.80	2MB	2	3GB	500GB	None	DVD±RW	GMA	XP Pro	None	Nov 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300 with dual-core</b> , 1066MHz system bus, and 2MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB or 3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	
	DisplayPort™ to Single-link DVI-D Cable	45J7915	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	More accessories on O-M58E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe® Reader®			
• Windows Live™ Toolbar			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			
	Supports ThinkVantage® technologies		
	GREENGUARD® certified RoHS-compliant		
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>		

See footnotes for important warranty information  
 US models announced November 3, 2009  
 US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
M58e	7258-D3U	4x4	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	None	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7258-D2U	4x4	Pentium E5400	2.70	2MB	2	2GB	250GB	None	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7258-D1U	4x4	Pentium E5400	2.70	2MB	2	3GB	320GB	None	DVD±RW	GMA	Pro 32	None	Jan 10

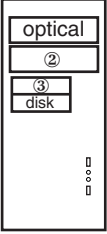
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value <b>Intel® Celeron® Processor E3200</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5400</b> with dual-core, 800MHz system bus, and 2MB L2 cache Processor in LGA775 socket		<b>Tower</b>	
Implementation	Processor in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, PCI Express x16 (75w max)</li> <li>Slot 2: half-length, full-height, PCI Express x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar			
eSATA port	None		Supports ThinkVantage® technologies	
Diskette drive	None			
Media reader	None		GREENGUARD® certified RoHS-compliant	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM 41U2977			
<b>Preloaded applications<sup>5</sup></b> (only some listed)	2GB PC2-6400 DDR2 UDIMM 41U2978			
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
• Password Manager	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
• ThinkVantage Power Manager	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675			
• ThinkVantage Toolbox	DisplayPort™ to Single-link DVI-D Cable 45J7915			
• Lenovo Online Data Backup	ADD2 DVI-D Monitor Connection (HDCP) 43R1985			
• Norton™ Internet Security 2011 (30 days of virus definitions)	NVIDIA® Quadro® 256MB NVS 290 43R1765			
• Adobe® Reader®	More accessories on O-M58E sheet			
• Adobe Flash® Player	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Skype™ for Windows	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

See footnotes for important warranty information  
US models announced December 15, 2009  
US models withdrawn effective December 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
M58e	7268-A8U	4x4	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro	None	None	Apr 09
M58e	7268-A9U	4x4	Pentium E5200	2.50	2MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7268-A3U	4x4	Core 2 Duo E7400	2.80	3MB	2	1GB	160GB	None	DVD	GMA	XP Pro	None	None	Apr 09
M58e	7268-A4U	4x4	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7268-B3U	4x4	Core 2 Duo E7400	2.80	3MB	2	3GB	320GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7268-B4U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
M58e	7268-B2U	4x4	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09

• These small and medium business (SMB) models are part of the US TopSeller™ Program  
 • These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Stability and manageability for small and medium businesses <b>Intel® Pentium® Processor E5200 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.7 lb (11.2 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Memory	<b>1GB, 2GB, or 3GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB or 3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>USB port disablement</li> </ul> Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant
SATA disk	<b>160GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 NP DDR2 UDIMM 41U2977	
	2GB PC2-6400 NP DDR2 UDIMM 41U2978	
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
	USB Portable Diskette Drive 05K9276	
	USB 2.0 Lenovo Multimedia Headset 40Y8518	
	USB 2.0 Lenovo Webcam 40Y8519	
	USB 2.0 Essential Memory Key 32GB 45K1258	
	USB 2.0 Portable Secure 320GB Hard Disk 43R2019	
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675	
	ThinkVision® L2240p Wide 22" Monitor 4422HB6	
	ThinkVision L2440p Wide 24" Monitor 4420HB2	
	Preferred Pro Full Size PS/2 Keyboard 31P7415	
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074	
	Kensington Twin Head Cable Lock 45K1620	
	DisplayPort to Single-link DVI-D Cable 45J7915	
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
	ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636	
	NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup></b>		
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• McAfee® VirusScan® Plus (30 days of virus definitions)		
• Lenovo System Toolbox		
• Adobe® Reader		
• Windows Live™ Toolbar		
• Windows Live Search		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		
		<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced March 10 or April 7, 2009  
 US models withdrawn effective April or August 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
M58e	7268-B5U	4x4	Pentium E5300	2.60	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro	None	Jul 09
M58e	7268-B6U	4x4	Pentium E5300	2.60	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	None	Jul 09
M58e	7268-B7U	4x4	Core 2 Duo E7500	2.93	3MB	2	3GB	250GB	None	DVD±RW	GMA	XP Pro	None	Jul 09
M58e	7268-B8U	4x4	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	None	DVD±RW	GMA	XP Pro	None	Jul 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning	<b>Mainstream enterprise stability and manageability</b>								<b>Tower</b>		
Processor	<b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket								<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket								Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies
Memory	<b>1GB, 2GB, or 3GB std</b> , 4GB max <sup>a</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available								Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB or 3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter								<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		
SATA disk	<b>160GB, 250GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts								<b>Security</b>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7								• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul>		
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive								• Power-on password		
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive								• Administrator password		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar								• Hard disk password		
eSATA port	None								• Boot sequence control		
Diskette drive	None								• Boot without keyboard, diskette		
Media reader	None								• Serial port I/O control		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)								• Parallel port I/O control		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)								• USB port disablement		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)								Supports ThinkVantage® technologies		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)								GREENGUARD® certified		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec								RoHS-compliant		
Speaker	One internal speaker for business audio								<b>Limited Warranty<sup>1</sup></b>		
IEEE 1394	None								↪ 3-year parts and labor		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®								↪ International Warranty Service <sup>9</sup>		
Intel AMT	None								↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)		
Modem	None								↪ Onsite service upgrade options (in eligible locations): <sup>7</sup>		
Security chip	None								• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo								• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo								• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)		
Power supply	280 watts with variable speed fan, manual switch								• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)				<b>Accessories</b>				↪ 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>				1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635 More accessories on O-M58E sheet				↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a>		
					Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				↪ Post warranty maintenance services available		
									↪ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378		

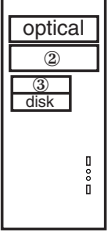
See footnotes for important warranty information  
 US models announced June 23, 2009  
 US models withdrawn effective November 2009

# ThinkCentre® M58e Tower (7268) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Preload	Global Educ	Avail date
<b>M58e</b>	7268-D2U	4x4	Pentium E5400	2.70	2MB	2	1GB	250GB <sup>2</sup>	None	DVD	GMA		XP Pro	None	Jan 10
<b>M58e</b>	7268-D1U	4x4	Pentium E5400	2.70	2MB	2	2GB	250GB	None	DVD±RW	GMA		XP Pro	None	Jan 10
<b>M58e</b>	7268-C3U	4x4	Pentium E6300	2.80	2MB	2	1GB	250GB	None	DVD	GMA	Switch	XP Pro	None	Nov 09
<b>M58e</b>	7268-C4U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	Switch	XP Pro	None	Nov 09
<b>M58e</b>	7268-C5U	4x4	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW	GMA		XP Pro	None	Nov 09
<b>M58e</b>	7268-C6U	4x4	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	None	DVD±RW	GMA		XP Pro	None	Nov 09
<b>M58e</b>	7268-E1U	4x4	Core 2 Quad Q9500	2.83	6MB	4	3GB	500GB	None	DVD±RW	GMA		XP Pro	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5400 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300 with dual-core</b> , 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 or Q9500 with quad-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB or 3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	
	DisplayPort™ to Single-link DVI-D Cable	45J7915	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	More accessories on O-M58E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe® Reader®			
• Windows Live™ Toolbar			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			

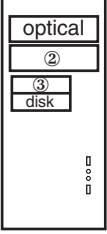
See footnotes for important warranty information  
 US models announced November 3, 2009, December 15, 2009, or March 2, 2010  
 US models withdrawn effective January, April, or October 2010

# ThinkCentre® M58e Tower (7268) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
<b>M58e</b>	7268-D3U	4x4	Pentium E5400	2.70	2MB	2	1GB	250GB <sup>2</sup>	None	DVD	GMA	Pro 32	None	Jan 10
<b>M58e</b>	7268-D4U	4x4	Pentium E5400	2.70	2MB	2	2GB	250GB	None	DVD±RW	GMA	Pro 32	None	Jan 10
<b>M58e</b>	7268-D5U	4x4	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW	GMA	Pro 32	None	Jan 10
<b>M58e</b>	7268-D6U	4x4	Core 2 Quad Q9400	2.66	6MB	4	3GB	500GB	None	DVD±RW	GMA	Pro 32	None	Jan 10
<b>M58e</b>	7268-E2U	4x4	Core 2 Quad Q9500	2.83	6MB	4	3GB	500GB	None	DVD±RW	GMA	Pro 32	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5400 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 or Q9500 with quad-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 																				
Implementation																						
Memory	<b>1GB, 2GB, or 3GB std.</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																				
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																				
SATA disk	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																					
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																					
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive																					
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																					
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar																					
eSATA port	None																					
Diskette drive	None																					
Media reader	None																					
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p>																				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																					
Speaker	One internal speaker for business audio																					
IEEE 1394	None																					
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																					
Intel AMT	None																					
Modem	None																					
Security chip	None																					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																					
Power supply	280 watts with variable speed fan, manual switch																					
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32																					
<b>Preloaded applications<sup>5</sup></b> (only some listed)	• Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Online Data Backup • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Adobe Flash® Player • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW)	<b>Accessories</b> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td> <td>41N5618</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td> <td>45K1675</td> </tr> <tr> <td>DisplayPort™ to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> </table> <p>More accessories on O-M58E sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort™ to Single-link DVI-D Cable	45J7915	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	NVIDIA® Quadro® 256MB NVS 290	43R1765
1GB PC2-6400 DDR2 UDIMM	41U2977																					
2GB PC2-6400 DDR2 UDIMM	41U2978																					
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																					
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																					
DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618																					
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																					
Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675																					
DisplayPort™ to Single-link DVI-D Cable	45J7915																					
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																					
NVIDIA® Quadro® 256MB NVS 290	43R1765																					
		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																				

See footnotes for important warranty information  
US models announced January 12 or March 2, 2010  
US models withdrawn effective April or December 2010

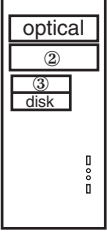


# ThinkCentre® M58e Tower (7270) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	Media reader	SATA disk	2nd Disk Bay	SATA optical	Graphics	FireWire adapter	Vista preload	Global Educ	Avail date
<b>M58e</b>	7270-A3U	4x4	Pentium E2220	2.40	1MB	2	2GB		160GB <sup>2</sup>	No	DVD±RW	GMA		Bus32	No	Apr 09
<b>M58e</b>	7270-A2U	4x4	Core 2 Duo E7300	2.66	3MB	2	2GB		160GB	No	DVD±RW	GMA		Bus32	No	Apr 09
<b>M58e</b>	7270-A1U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB		160GB	No	DVD±RW	GMA		Bus32	No	Apr 09
<b>M58e</b>	7270-A4U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	25-in-1	160GB	No	DVD±RW	GMA	1394	Bus32	No	Apr 09

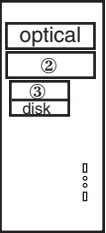
- **These models have a 1-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E2220</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, opt reader/diskette* Bay ④ 3.5", 1" high, no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		* occupied by media reader in some models Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3** Slot 4: half-length, full-height, 32-bit PCI 2.3 ** occupied by FireWire adapter in some models	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	<i>Some:</i> 25-in-1 media reader, internal USB 2.0			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	<i>Some:</i> FireWire PCI adapter / IEEE 1394 FireWire 400 (dual 6-pin ports on rear; 1394-1995 standard)			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ✦ Vista Basic logo			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
 US models announced March 10, 2009  
 US models withdrawn effective June, August, or December 2009 or December 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
M58e	7298-F2U	4x4	Pentium E5200	2.50	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro		Apr 09
M58e	7298-C3U	4x4	Pentium E5300	2.60	2MB	2	1GB	160GB	None	DVD	GMA	XP Pro		Apr 09
M58e	7298-C4U	4x4	Pentium E5300	2.60	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-C5U	4x4	Core 2 Duo E7400	2.80	3MB	2	1GB	160GB	None	DVD	GMA	XP Pro		Apr 09
M58e	7298-C6U	4x4	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-C7U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-C8U	4x4	Core 2 Duo E8400	3.00	6MB	2	1GB	160GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-D1U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-F8U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	Educ	Apr 09
M58e	7298-C9U	4x4	Core 2 Duo E8500	3.16	6MB	2	1GB	250GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-D2U	4x4	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-F9U	4x4	Core 2 Quad Q8200	2.33	4MB	4	2GB	250GB	None	DVD±RW	GMA	XP Pro		Apr 09
M58e	7298-G1U	4x4	Core 2 Quad Q9400	2.66	6MB	4	2GB	250GB	None	DVD±RW	GMA	XP Pro		Apr 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5200 or E5300 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 or E8500 with dual-core,</b> 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q8200 with quad-core,</b> 1333MHz system bus, and 4MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core,</b> 1333MHz system bus, and 6MB L2 cache	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Memory	<b>1GB or 2GB std,</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500),</b> integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
SATA disk	<b>160GB or 250GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM 41U2977	
	2GB PC2-6400 DDR2 UDIMM 41U2978	
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675	
	DisplayPort to Single-link DVI-D Cable 45J7915	
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
	NVIDIA® Quadro® 256MB NVS 290 43R1765	
	More accessories on O-M58E sheet	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• <i>Some:</i> Education software	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
- VitalSource Library School Edition		
- Adobe® Elements		
- Photoshop Elements 7		
- Premiere Elements 7		
• Rescue and Recovery™		
• McAfee® VirusScan® Plus (30-day)		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information

US models announced March 10 or March 24, 2009

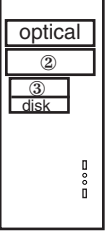
US models withdrawn effective October 2009, December 2009, April 2010, or October 2010

# ThinkCentre® M58e Tower (7298) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor connectors	Vista preload	Global Educ	Avail date
<b>M58e</b>	7298-G2U	4x4	Core 2 Quad Q9400	2.66	6MB	4	4GB	500GB <sup>2</sup>	None	BD burner	<b>3470</b>	VGA, DP	Bus64	None	Apr 09

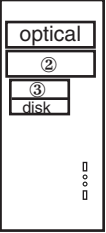
- *This model has a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Quad Processor Q9400</b> with <b>quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 																																																														
Implementation	Processor in FC-LGA8 package in LGA775 socket																																																																								
Memory	<b>4GB std</b> , 4GB max <sup>9</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available																																																																								
Graphics	<b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts																																																																								
SATA disk	<b>500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										Bay ① 5.25", 1.6" high, access, std optical																																																														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7										Bay ② 5.25", 1.6" high, access, open																																																														
SATA BD burner	Blu-ray™ Burner SATA 1.5Gb/s Drive										Bay ③ 3.5", 1" high, access, optional reader																																																														
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors										Bay ④ 3.5", 1" high, no access, std disk																																																														
eSATA port	None										Slot 1: half-length, full-height, PCI Express x16 (75w max)*																																																														
Diskette drive	None										Slot 2: half-length, full-height, PCI Express x1																																																														
Media reader	25-in-1 media reader, internal USB 2.0										Slot 3: half-length, full-height, 32-bit PCI 2.3																																																														
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)										Slot 4: half-length, full-height, 32-bit PCI 2.3																																																														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																																																														
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																																																																								
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																																																								
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																																																																								
Speaker	One internal speaker for business audio																																																																								
IEEE 1394	None																																																																								
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																																																																								
Intel AMT	None																																																																								
Modem	None																																																																								
Security chip	None																																																																								
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																																																																								
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																																								
Power supply	280 watts with variable speed fan, manual switch																																																																								
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Genuine Windows® Vista® Business 64</td> <td>1GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>↕ Vista Premium logo</td> <td>2GB PC2-6400 NP DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td></td> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td></td> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td></td> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td></td> <td>Blu-ray Burner SATA 1.5Gb/s Drive</td> <td>45K1675</td> </tr> <tr> <td></td> <td>ThinkVision® L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td></td> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td></td> <td>Ultraslim Wireless Keyboard and Mouse</td> <td>57Y4700</td> </tr> <tr> <td></td> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td></td> <td>Kensington MicroSaver Cable Lock</td> <td>73P2582</td> </tr> <tr> <td></td> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td></td> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td></td> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td></td> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td></td> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> <tr> <td></td> <td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td> <td>45K1635</td> </tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										- Genuine Windows® Vista® Business 64	1GB PC2-6400 NP DDR2 UDIMM	41U2977	↕ Vista Premium logo	2GB PC2-6400 NP DDR2 UDIMM	41U2978		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		USB Portable Diskette Drive	05K9276		USB 2.0 Lenovo Multimedia Headset	40Y8518		USB 2.0 Lenovo Webcam	40Y8519		USB 2.0 Essential Memory Key 32GB	45K1258		USB 2.0 Portable Secure 320GB Hard Disk	43R2019		Blu-ray Burner SATA 1.5Gb/s Drive	45K1675		ThinkVision® L2240p Wide 22" Monitor	4422HB6		ThinkVision L2440p Wide 24" Monitor	4420HB2		Ultraslim Wireless Keyboard and Mouse	57Y4700		Laser Tilt Wheel Mouse (USB, PS/2)	41U3074		Kensington MicroSaver Cable Lock	73P2582		Kensington Twin Head Cable Lock	45K1620		DisplayPort to Single-link DVI-D Cable	45J7915		ADD2 DVI-D Monitor Connection (HDCP)	43R1985		ATI Radeon HD 2400 XT 256MB	43R1962		ATI Radeon HD 3470 256MB (DP, VGA)	45K1636		NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635
- Genuine Windows® Vista® Business 64	1GB PC2-6400 NP DDR2 UDIMM	41U2977																																																																							
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	Supports ThinkVantage® technologies																																																																								
	GREENGUARD® certified RoHS-compliant																																																																								
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																																								

See footnotes for important warranty information  
 US model announced April 7, 2009  
 US model withdrawn effective November 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
M58e	7298-H9U	4x4	Pentium E5300	2.60	2MB	2	2GB	160GB <sup>2</sup>	None	DVD±RW	GMA	XP Pro	Educ	Jul 09
M58e	7298-H6U	4x4	Core 2 Duo E7500	2.93	3MB	2	1GB	160GB	None	DVD	GMA	XP Pro		Jul 09
M58e	7298-H8U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	Educ	Jul 09
M58e	7298-H7U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro		Jul 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Essential business features, exceptional value <b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache							<b>Tower</b>			
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket							<ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.7 lb (11.2 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>			
Memory	<b>1GB</b> or <b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available							Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk			
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter							Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening							<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>USB port disablement</li> </ul> Supports ThinkVantage® technologies			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7										
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors										
eSATA port	None										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	One internal speaker for business audio										
IEEE 1394	None										
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, manual switch										
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>							GREENGUARD® certified RoHS-compliant			
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58E sheet							<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>			
<b>Preloaded applications<sup>5</sup></b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										
- <i>Some:</i> Education software	- VitalSource Library School Edition - Adobe® Elements - Photoshop Elements 7 - Premiere Elements 7 • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • McAfee® VirusScan® Plus (30 days of virus definitions) • Lenovo System Toolbox • Adobe Reader® • Windows Live™ Toolbar • Microsoft® Office 2007 Trial (60-day) • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD, DVD±RW)										
- VitalSource Library School Edition											
- Adobe® Elements											
- Photoshop Elements 7											
- Premiere Elements 7											
• Rescue and Recovery™											
• Client Security Solution™											
• ThinkVantage Productivity Center											
• ThinkVantage System Update											
• McAfee® VirusScan® Plus (30 days of virus definitions)											
• Lenovo System Toolbox											
• Adobe Reader®											
• Windows Live™ Toolbar											
• Microsoft® Office 2007 Trial (60-day)											
• Roxio® Creator® Business Edition (DVD±RW)											
• Roxio MyDVD® (DVD±RW)											
• Corel® WinDVD® (DVD, DVD±RW)											

See footnotes for important warranty information

US models announced July 7, 2009

US models withdrawn effective December 2009 or October 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
M58e	7298-N1U	4x4	Pentium E6300	2.80	2MB	2	1GB	250GB <sup>2</sup>	None	DVD	GMA	XP Pro		Oct 09
M58e	7298-N2U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro		Oct 09
M58e	7298-N3U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	Educ	Oct 09
M58e	7298-M9U	4x4	Core 2 Quad Q8400	2.66	4MB	4	2GB	250GB	None	DVD±RW	GMA	XP Pro		Oct 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Essential business features, exceptional value <b>Intel® Pentium® Processor E6300</b> with dual-core, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Quad Processor Q8400</b> with quad-core, Virtualization Technology, 1333MHz system bus, and 4MB L2 cache Processor in LGA775 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>1GB</b> or <b>2GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		GREENGUARD® certified RoHS-compliant
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</li> </ul>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 7</li> <li>- Premiere Elements 7</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>		

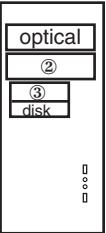
See footnotes for important warranty information  
 US models announced October 22, 2009  
 US models withdrawn effective December 2009 or October 2010

# ThinkCentre® M58e Tower (7298) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
M58e	7298-Q1U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB <sup>2</sup>	None	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7298-Q2U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW	GMA	Pro 32	None	Jan 10
M58e	7298-Q3U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	None	DVD±RW	GMA	Pro 32	None	Jan 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E6300</b> with dual-core, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>	
Implementation	Processor in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX <sup>®</sup> 10, supports dual independent display with optional ADD2 adapter		Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express <sup>®</sup> x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN <sup>®</sup>			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows <sup>®</sup> 7 Professional 32	1GB PC2-6400 DDR2 UDIMM	41U2977		GREENGUARD <sup>®</sup> certified RoHS-compliant
<b>Preloaded applications<sup>5</sup></b> (only some listed)	2GB PC2-6400 DDR2 UDIMM	41U2978		
• Rescue and Recovery <sup>™</sup>	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015		
• Password Manager	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
• ThinkVantage Power Manager	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
• ThinkVantage Toolbox	Blu-ray <sup>™</sup> Burner SATA 1.5Gb/s Drive	45K1675		
• Lenovo Online Data Backup	DisplayPort <sup>™</sup> to Single-link DVI-D Cable	45J7915		
• Norton <sup>™</sup> Internet Security 2011 (30 days of virus definitions)	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
• Adobe <sup>®</sup> Reader <sup>®</sup>	NVIDIA <sup>®</sup> Quadro <sup>®</sup> 256MB NVS 290	43R1765		
• Adobe Flash <sup>®</sup> Player	More accessories on O-M58E sheet			
• Skype <sup>™</sup> for Windows	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Microsoft Office 2010 preloaded; purchase product key to activate	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Roxio <sup>®</sup> Creator <sup>®</sup> Business Edition (DVD±RW)				
• Roxio MyDVD <sup>®</sup> (DVD±RW)				
				<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

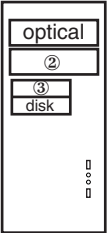
See footnotes for important warranty information  
 US models announced December 15, 2009  
 US models withdrawn effective December 2010

# ThinkCentre® M58e Tower (7491) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Preload	Global Educ	Avail date
<b>M58e</b>	7491-B6U	4x4	Pentium E5300	2.60	2MB	2	1GB	160GB <sup>2</sup>	None	DVD	GMA	None	XP Pro		Apr 09
<b>M58e</b>	7491-B7U	4x4	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	None	DVD±RW	GMA	None	XP Pro		Apr 09
<b>M58e</b>	7491-B8U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	None	DVD±RW	GMA	None	XP Pro		Apr 09
<b>M58e</b>	7491-C4U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	None	DVD±RW	GMA	None	XP Pro	Educ	Apr 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.7 lb (11.2 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 80% PSU			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li><i>Some</i>: Education software</li> <li>VitalSource Library School Edition</li> <li>Adobe® Elements                             <ul style="list-style-type: none"> <li>Photoshop Elements 7</li> <li>Premiere Elements 7</li> </ul> </li> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>Lenovo System Toolbox</li> <li>Adobe Reader®</li> <li>Windows Live™ Toolbar</li> <li>Microsoft® Office 2007 Trial (60-day)</li> <li>Roxio® Creator® Business Edition (DVD±RW)</li> <li>Roxio MyDVD® (DVD±RW)</li> <li>Corel® WinDVD® (DVD, DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> </ul> More accessories in O-M58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
				<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

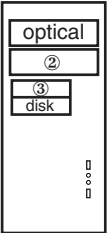
See footnotes for important warranty information  
 US models announced March 10 or March 24, 2009  
 US models withdrawn effective October 2009

# ThinkCentre® M58e Tower (7847) - ES 5.0 (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Preload	Global Educ	Avail date
<b>M58e</b>	7847-A2U	4x4	Pentium E6300	2.80	2MB	2	1GB	250GB <sup>2</sup>	None	DVD	GMA	ES50	XP Pro	None	Oct 09
<b>M58e</b>	7847-A3U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	ES50	XP Pro	None	Oct 09
<b>M58e</b>	7847-A4U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW	GMA	ES50	XP Pro	None	Oct 09
<b>M58e</b>	7847-A5U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	None	DVD±RW	GMA	ES50	XP Pro	None	Oct 09
<b>M58e</b>	7847-A7U	4x4	Core 2 Quad Q9400	2.66	6MB	4	3GB	320GB	None	DVD±RW	GMA	ES50	XP Pro	None	Oct 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Essential business features, exceptional value</i></p> <p><b>Intel® Pentium® Processor E6300 with dual-core</b>, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache or</p> <p><b>Intel Core™ 2 Duo Processor E7500 with dual-core</b>, Virtualization Technology, 1066MHz system bus, and 3MB L2 cache or</p> <p><b>Intel Core 2 Duo Processor E8400 with dual-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or</p> <p><b>Intel Core 2 Quad Processor Q9400 with quad-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache</p> <p>Processor in LGA775 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>
Memory	<p><b>1GB, 2GB, or 3GB std.</b> 4GB max<sup>8</sup>, <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available</p>		<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCI Express x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>
Graphics	<p><b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b>, integrated graphics in G41, uses main memory (up to 512MB [<i>1GB models</i>], 1GB [<i>2GB or 3GB models</i>]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA disk	<p><b>250GB or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		<p>Supports ThinkVantage® technologies</p> <p>Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>		
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), ethernet (RJ-45), monitor (VGA DB-15)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
IEEE 1394	None		
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®</p>		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>280 watts with variable speed fan, autosensing, 85% PSU</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	
	DisplayPort™ to Single-link DVI-D Cable	45J7915	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	More accessories on O-M58E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>		

See footnotes for important warranty information  
US models announced October 22, 2009  
US models withdrawn effective April or October 2010



Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Vista logo	Global (G) GMP (P)	Avail date
M58e	7307-A1U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB <sup>2</sup>	None	DVD±RW	GMA	Business32	Basic	G P	Apr 09

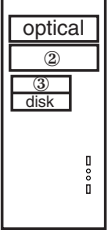
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										
Implementation	Processor in FC-LGA8 package in LGA775 socket										
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available										
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter										
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7										
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors										
eSATA port	None										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	One internal speaker for business audio										
IEEE 1394	None										
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, manual switch										
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>										
- Genuine Windows® Vista® Business 32	1GB PC2-6400 DDR2 UDIMM 41U2977										
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-6400 DDR2 UDIMM 41U2978										
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015										
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990										
• ThinkVantage Productivity Center	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918										
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive 41N5620										
• ThinkVantage Power Manager	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675										
• McAfee® VirusScan® Plus (30 days of virus definitions)	DisplayPort to Single-link DVI-D Cable 45J7915										
• Lenovo System Toolbox	ADD2 DVI-D Monitor Connection (HDCP) 43R1985										
• Adobe® Reader®	NVIDIA® Quadro® 256MB NVS 290 43R1765										
• Windows Live™ Toolbar	More accessories on O-M58E sheet										
• Microsoft Office 2010 preloaded; purchase product key to activate	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>										
• Roxio® Creator® Business Edition (DVD±RW)	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										
• Roxio MyDVD® (DVD±RW)											
• Corel® WinDVD® (DVD±RW)											
Supports ThinkVantage® technologies											
GREENGUARD® certified RoHS-compliant											
<b>Limited Warranty<sup>1</sup></b>											
<ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>											

See footnotes for important warranty information  
 US model announced March 10, 2009  
 US model withdrawn effective December 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Vista preload	Global (G) GMP (P)	Avail date
M58e	7508-A2U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB <sup>2</sup>	None	DVD±RW	GMA	None	Bus32	G P	Apr 09

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 				
Implementation	Processor in FC-LGA8 package in LGA775 socket														
Memory	<p><b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Non-italics:</i> standard memory in one socket; one socket available</p>														
Graphics	<p><b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b>, integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter</p>														
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                      Slot 2: half-length, full-height, PCI Express x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7														
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors														
eSATA port	None														
Diskette drive	None														
Media reader	None														
Chipset	<p><b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)</p>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	One internal speaker for business audio														
IEEE 1394	None														
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®														
Intel AMT	None														
Modem	None														
Security chip	None														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 80% PSU														
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® Vista® Business 32                      ♦ Vista Basic logo</p>					<p><b>Accessories</b></p> <p>1GB PC2-6400 DDR2 UDIMM 41U2977                      2GB PC2-6400 DDR2 UDIMM 41U2978                      250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015                      500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                      1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918                      Super Multi-Burner DL DVD±RW SATA Drive 41N5620                      Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675                      DisplayPort to Single-link DVI-D Cable 45J7915                      ADD2 DVI-D Monitor Connection (HDCP) 43R1985                      ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962                      ATI Radeon HD 3470 256MB (DP, VGA) 45K1636                      NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635                      More accessories on O-M58E sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>					<p>Supports ThinkVantage® technologies</p>				
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>										<p>GREENGUARD® certified                      RoHS-compliant</p>				
<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>															

See footnotes for important warranty information  
 US model announced March 10, 2009  
 US model withdrawn effective November 2009

**ThinkCentre® M58e Tower (7843) - ES 5.0 (GMP) - Windows 7 - withdrawn** *Personal Systems Reference (PSREF)*

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Win7 preload	Global (G) GMP (P)	Avail date
<b>M58e</b>	7843-A1U	4x4	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB <sup>2</sup>	None	DVD±RW	GMA	ES50	Pro 32	G P	Oct 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache											
Implementation	Processor in LGA775 socket											
Memory	<b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available											
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter											
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)                      Slot 2: half-length, full-height, PCI Express x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors											
eSATA port	None											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>											
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM 41U2977											
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	2GB PC2-6400 DDR2 UDIMM 41U2978											
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015											
• Password Manager	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990											
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918											
• ThinkVantage Power Manager	Super Multi-Burner DL DVD±RW SATA Drive 41N5620											
• ThinkVantage Toolbox	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675											
• Lenovo Online Data Backup	DisplayPort™ to Single-link DVI-D Cable 45J7915											
• Norton™ Internet Security 2011 (30 days of virus definitions)	ADD2 DVI-D Monitor Connection (HDCP) 43R1985											
• Adobe® Reader®	NVIDIA® Quadro® 256MB NVS 290 43R1765											
• Adobe Flash® Player	More accessories on O-M58E sheet											
• Skype™ for Windows	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>											
• Microsoft Office 2010 preloaded; purchase product key to activate	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											
• Roxio® Creator® Business Edition (DVD±RW)												
• Roxio MyDVD® (DVD±RW)												
Supports ThinkVantage® technologies												
Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant												
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>												

See footnotes for important warranty information  
 US model announced October 22, 2009  
 US model withdrawn effective December 2010

## Partial list of accessories supported on ThinkCentre M58e

**Memory**

1GB PC2-6400 DDR2 UDIMM	41U2977	ann 09/26/06
1GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0549	ann 03/17/09
2GB PC2-6400 DDR2 UDIMM	41U2978	ann 01/08/08
2GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0550	ann 03/17/09

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Tower 7268/7270/7298/7491/7307/7508/7847/7843/7258 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09
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**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

**Graphics**

Small 7269/7279/7303/7506/7408/7514/7259 support Low Profile 35

watts max:

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA® Quadro® 256MB NVS 290		
(2-DVI or 2-VGA via DMS59 dongles)	43R1765	ann 12/18/07
NVIDIA GeForce® 310 512MB DMS59		
(2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 7268/7270/7298/7491/7307/7508/7847/7843/7258 support 75

watts max:

DisplayPort to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA Quadro 256MB NVS 290	43R1765	ann 12/18/07
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphics card.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
UltraSlim Wireless Keyboard and Mouse <sup>52</sup>	57Y4700	ann 09/15/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black <sup>52</sup>	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black <sup>52</sup>	51J0198	ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones <sup>60</sup>	57Y4488	ann 01/07/10
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<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on desktop accessories, please visit:

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
[www.lenovo.com/support/desktopaccessories](http://www.lenovo.com/support/desktopaccessories)  
[www.lenovo.com/support/security](http://www.lenovo.com/support/security)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre M58 Eco Ultra Small



Lenovo ThinkCentre M58 Eco Ultra Small with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre M58 Small



Lenovo ThinkCentre M58 Small with Lenovo ThinkVision monitor



Lenovo ThinkCentre M58 Tower



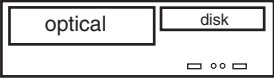
Lenovo ThinkCentre M58 Tower with dual Lenovo ThinkVision monitors

# ThinkCentre® M58 Eco Ultra Small (8820) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date
<b>M58</b>	8820-A3U	1x2	Celeron E1200	1.60	2	1GB	160GB <sup>2</sup> DVD	GMA	VGA, DP	None	ES50	No	XP Pro	No	Dec 08
<b>M58</b>	8820-A4U	1x2	Pentium E5200	2.50	2	1GB	160GB DVD±RW	GMA	VGA, DP	None	ES50	No	XP Pro	No	Dec 08

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate stability for small and medium businesses</i></p> <p><b>Intel® Celeron® Dual-Core Processor E1200</b> with dual-core, 800MHz system bus, and 512KB L2 cache or  <b>Intel Pentium® Dual-Core Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache</p>		<p><b>Eco Ultra Small</b></p> 
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<p><b>1GB std, 4GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook);  <i>Non-italics</i>: standard memory in one socket; one socket available</p>		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987</li> <li>2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L2440x Wide 24" Monitor 4421HB2</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Lenovo USB Fingerprint Keyboard 73P4730</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>Kensington Twin Head Cable Lock 45K1620</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		

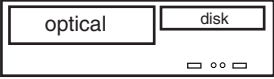
See footnotes for important warranty information  
 US models announced November 11, 2008  
 US models withdrawn effective April or August 2009

# ThinkCentre® M58 Eco Ultra Small (8820) - TopS (June 09) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload	Educ	Avail date
<b>M58</b>	8820-AFU	1x2	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Jul 09
<b>M58</b>	8820-E7U	1x2	Pentium E5300	2.60	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Aug 09
<b>M58</b>	8820-E8U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Aug 09
<b>M58</b>	8820-AGU	1x2	Core 2 Duo E7500	2.93	2	2GB	320GB	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Jul 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

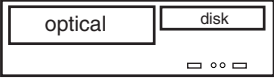
Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache	<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		
SATA disk	<b>160GB, 250GB, or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		Supports ThinkVantage® technologies EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>		
<b>Accessories</b>	1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987 2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 ThinkCentre Ultra Small Under Desk Mount 40Y8625 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
			<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced June 16 or July 14, 2009  
 US models withdrawn effective August or November 2009

# ThinkCentre® M58 Eco Ultra Small (8820) - TopSeller (Jan 09) - withdrawn Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
<b>M58</b>	8820-A8U	1x2	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	No	XP Pro	No	Feb 09
<b>M58</b>	8820-A9U	1x2	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	ES50	No	XP Pro	No	Feb 09
<b>M58</b>	8820-A11	1x2	Core 2 Duo E7400	2.80	2	2GB	320GB	DVD±RW	GMA	VGA, DP	None	ES50	No	Bus32	No	Feb 09
<b>M58</b>	8820-ADU	1x2	Core 2 Duo E7400	2.80	2	2GB	320GB	DVD±RW	GMA	VGA, DP	None	ES50	No	Bus32	No	Apr 09
<b>M58</b>	8820-AEU	1x2	Core 2 Duo E7500	2.93	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	ES50	No	Bus32	No	Apr 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate stability for small and medium businesses</i> <b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> or <b>E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket			
Memory	<b>1GB</b> or <b>2GB std.</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics:</i> standard memory in one socket; one socket available		<b>Bay ①</b> 5.25", 1.6" high, access, std optical <b>Bay ②</b> 3.5", 1" high, no access, std disk  Slot 1: Low Profile, 32-bit PCI 2.3  <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory ( <i>XP Pro models:</i> up to 512MB [ <i>1GB models:</i> ]; <i>Vista models:</i> up to 765MB [ <i>2GB models:</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>160GB</b> or <b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987 2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2440x Wide 24" Monitor 4421HB2 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 ThinkCentre Ultra Small Under Desk Mount 40Y8625 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Lenovo USB Fingerprint Keyboard 73P4730 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 Kensington Twin Head Cable Lock 45K1620 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
- <i>Some:</i> Genuine Windows Vista Business 32				
↪ <i>Vista models:</i> Vista Premium logo				
<b>Preloaded applications<sup>5</sup></b> (all OSes)				
• Rescue and Recovery™				
• Client Security Solution™				
• ThinkVantage Productivity Center				
• ThinkVantage System Update				
• ThinkVantage Power Manager (Vista)				
• McAfee® VirusScan® Plus (30 days of virus definitions)				
• Lenovo System Toolbox				
• Adobe® Reader				
• Microsoft® Office 2007 Trial (60-day)				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD±RW)				

See footnotes for important warranty information  
 US models announced January 20, February 12, or April 7, 2009  
 US models withdrawn effective April or August 2009

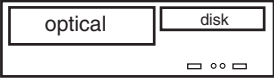


# ThinkCentre® M58 Eco Ultra Small (8820) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
M58	8820-ANU	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>b</sup>	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Nov 09

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket										<b>Eco Ultra Small</b>															
Implementation	Processor in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk															
Memory	<b>2GB std</b> , 8GB max <sup>a</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available										Slot 1: Low Profile, 32-bit PCI 2.3															
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>															
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support																									
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																									
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar																									
eSATA port	None										Supports ThinkVantage® technologies															
Diskette drive	None																									
Media reader	None																									
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										<p>EPEAT™ Gold rating</p> <p>ENERGY STAR® 5.0-compliant</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>															
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																									
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																									
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																									
Speaker	One internal speaker for business audio																									
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																									
Intel AMT	None																									
Modem	None																									
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										Supports ThinkVantage® technologies															
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																									
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU																									
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</li> </ul>										<p><b>Accessories</b></p> <table border="0"> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>Lenovo Vertical PC and Monitor Stand II</td> <td>41R4474</td> </tr> <tr> <td>ThinkCentre Ultra Small Under Desk Mount</td> <td>40Y8625</td> </tr> </table> <p>More accessories on O-M58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	Lenovo Vertical PC and Monitor Stand II	41R4474	ThinkCentre Ultra Small Under Desk Mount	40Y8625
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																									
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Lenovo Vertical PC and Monitor Stand II	41R4474																									
ThinkCentre Ultra Small Under Desk Mount	40Y8625																									
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																									

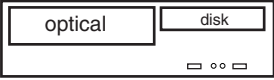
See footnotes for important warranty information  
US model announced November 3, 2009  
US model withdrawn effective October 2010

# ThinkCentre® M58 Eco Ultra Small (8820) - TopS (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8820-AQU	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>b</sup>	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Jan 10

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket		<b>Eco Ultra Small</b>		
Implementation	Processor in LGA775 socket				
Memory	<b>2GB std</b> , 8GB max <sup>c</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, 32-bit PCI 2.3		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar				
eSATA port	None				
Diskette drive	None				
Media reader	None				
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	None				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			<b>Security</b>	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo				
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU				
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>				
- Genuine Windows® 7 Professional 32	500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm)		45J7918		
	DisplayPort to Single-link DVI-D Cable		45J7915		
	DisplayPort to VGA Monitor Cable		57Y4393		
	Lenovo Vertical PC and Monitor Stand II		41R4474		
	More accessories on O-M58 sheet				
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>				
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				
<b>Preloaded applications<sup>5</sup></b> (only some listed)					
• Rescue and Recovery™					
• ThinkVantage System Update					
• ThinkVantage Power Manager					
• ThinkVantage Toolbox					
• Norton™ Internet Security 2011 (30 days of virus definitions)					
• Adobe® Reader®					
• Adobe Flash® Player					
• Microsoft Office 2010 preloaded; purchase product key to activate					
• Roxio® Creator® Business Edition (DVD±RW)					
• Roxio MyDVD® (DVD±RW)					
				<b>Limited Warranty<sup>1</sup></b>	
				↪ 3-year parts and labor	
				↪ International Warranty Service <sup>9</sup>	
				↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)	
				↪ Onsite service upgrade options (in eligible locations): <sup>7</sup>	
				• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)	
				• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)	
				• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)	
				• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)	
				• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)	
				↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a>	
				↪ Post warranty maintenance services available	
				↪ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378	

See footnotes for important warranty information  
US model announced January 12, 2010  
US model withdrawn effective March 2012

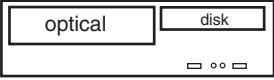
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(MLAN4-23) March 2012

# ThinkCentre® M58 Eco Ultra Small (7359) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
M58	7359-A6U	1x2	Pentium E2200	2.20	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		ES50	No	Bus32	No	Dec 08
M58	7359-AGU	1x2	Pentium E2200	2.20	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Dec 08
M58	7359-ABU	1x2	Pentium E2220	2.40	2	1GB	160GB	DVD±RW	GMA	VGA, DP		ES50	No	Bus32	No	Dec 08
M58	7359-ADU	1x2	Pentium E5200	2.50	2	2GB	160GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Dec 08
M58	7359-AEU	1x2	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Dec 08
M58	7359-AFU	1x2	Core 2 Duo E7300	2.66	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Dec 08

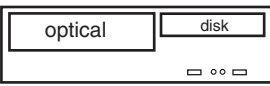
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Dual-Core Processor E2200 or E2220</b> with <b>dual-core</b>, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium Dual-Core Processor E5200</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>										<p><b>Eco Ultra Small</b></p> 	
Implementation	<p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk</p>	
Memory	<p><b>1GB or 2GB std</b>, 4GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook);  <i>Italics:</i> standard memory in both sockets; no sockets available;  <i>Non-italics:</i> standard memory in one socket; one socket available</p>										<p>Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display  <i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable)                             <ul style="list-style-type: none"> <li>- security slot and cover release button are combined into one latch for improved chassis security</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>	
DP dongle	<p><i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>										<p>Supports ThinkVantage® technologies</p>	
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>										<p>EPEAT™ Gold rating</p>	
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>										<p>ENERGY STAR® 5.0-compliant</p>	
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>										<p>GREENGUARD® certified</p>	
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>										<p>RoHS-compliant</p>	
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar</p>										<p><b>Limited Warranty<sup>1</sup></b></p>	
eSATA port	<p>None</p>										<p>↪ <b>3-year parts and labor</b></p>	
Diskette drive	<p>None</p>										<p>↪ <b>International Warranty Service<sup>9</sup></b></p>	
Media reader	<p>None</p>										<p>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></p>	
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>										<p>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b></p>	
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>										<p>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</p>	
Rear ports	<p>Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>										<p>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</p>	
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>										<p>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</p>	
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>										<p>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</p>	
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>										<p>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</p>	
Speaker	<p>One internal speaker for business audio</p>										<p>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></p>	
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>										<p>↪ <b>Post warranty maintenance services available</b></p>	
Intel AMT	<p>None</p>										<p>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></p>	
Modem	<p>None</p>											
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>											
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>											
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>											
Power supply	<p>External AC/DC adapter, 130 watts, autosensing, 87% PSU</p>											
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® Vista® Business 32                      ↪ Vista Premium logo</p>											
<b>Preloaded applications<sup>5</sup></b>	<p>• Rescue and Recovery™                      • Client Security Solution™                      • ThinkVantage Productivity Center                      • ThinkVantage System Update                      • ThinkVantage Power Manager                      • McAfee® VirusScan® Plus (30 days of virus definitions)                      • Lenovo System Toolbox                      • Adobe® Reader                      • Microsoft® Office 2007 Trial (60-day)                      • Roxio® Creator® Business Edition (DVD±RW)                      • Roxio MyDVD® (DVD±RW)                      • Corel® WinDVD® (DVD, DVD±RW)</p>											
<b>Accessories</b>	<p>1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987                      2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988                      500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                      1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918                      USB Portable Diskette Drive 05K9276                      USB 2.0 Lenovo Multimedia Headset 40Y8518                      USB 2.0 Lenovo Webcam 40Y8519                      USB 2.0 Essential Memory Key 32GB 45K1258                      USB 2.0 Ultra Secure Memory Key 8GB 45J5918                      USB 2.0 Portable Secure 320GB Hard Disk 43R2019                      DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618                      Super Multi-Burner DL DVD±RW SATA Drive 41N5620                      ThinkVision® L2440x Wide 24" Monitor 4421HB2                      DisplayPort to Single-link DVI-D Cable 45J7915                      DisplayPort to VGA Monitor Cable 57Y4393                      ThinkCentre Ultra Small Under Desk Mount 40Y8625                      Ultraslim Wireless Keyboard and Mouse 57Y4700                      Lenovo USB Fingerprint Keyboard 73P4730                      Laser Tilt Wheel Mouse (USB, PS/2) 41U3074                      Kensington Cable Lock from Lenovo 73P2582                      Kensington Twin Head Cable Lock 45K1620                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>											

See footnotes for important warranty information  
 US models announced November 11, 2008  
 US models withdrawn effective June, August, or October 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date
M58	7359-B5U	1x2	Pentium E5300	2.60	2	2GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	7359-B8U	1x2	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP		ES50	No	XP Pro	Apr 09
M58	7359-B1U	1x2	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	7359-B2U	1x2	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	7359-B3U	1x2	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	7359-B4U	1x2	Core 2 Duo E7500	2.93	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	7359-B6U	1x2	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32 Gbl	Feb 09

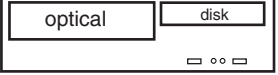
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache	<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		
Memory	<b>1GB or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory ( <i>XP Pro models</i> : up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]; <i>Vista models</i> : up to 765MB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some</i> : DisplayPort to Single-link DVI-D Cable		
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
			<b>Security</b>
			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>
			Supports ThinkVantage® technologies
			EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
			<b>Limited Warranty<sup>1</sup></b>
			<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>	
- <i>Some</i> : Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
- <i>Some</i> : Genuine Windows Vista Business 32		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
✦ <i>Vista models</i> : Vista Premium logo		DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618
<b>Preloaded applications<sup>5</sup> (all OSes)</b>		Super Multi-Burner DL DVD±RW SATA Drive	41N5620
• Rescue and Recovery™		DisplayPort to Single-link DVI-D Cable	45J7915
• Client Security Solution™		DisplayPort to VGA Monitor Cable	57Y4393
• ThinkVantage Productivity Center		Lenovo Vertical PC and Monitor Stand II	41R4474
• ThinkVantage System Update		ThinkCentre Ultra Small Under Desk Mount	40Y8625
• ThinkVantage Power Manager (Vista)		More accessories on O-M58 sheet	
• McAfee® VirusScan® Plus (30 days of virus definitions)		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Lenovo System Toolbox		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Adobe® Reader®			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			

See footnotes for important warranty information  
 US models announced January 20 or April 7, 2009  
 US models withdrawn effective October 2009, April 2010, or October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>3</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Preload	Global Educ	Avail date
M58	7359-E5U	1x2	Pentium E5300	2.60	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Educ	Aug 09
M58	7359-E6U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Educ	Aug 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor E5300 with dual-core</b>, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b>, 1066MHz system bus, and 3MB L2 cache</p>										<p><b>Eco Ultra Small</b></p> 	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Slot 1: Low Profile, 32-bit PCI 2.3</p>	
Memory	<p><b>2GB std</b>, 4GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i>: standard memory in one socket; one socket available</p>										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>	
DP dongle	DisplayPort to Single-link DVI-D Cable											
SATA disk	<p><b>250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>											
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1</p>											
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>										<p><b>Supports ThinkVantage® technologies</b></p>	
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar</p>											
eSATA port	None										<p>EPEAT™ Gold rating                  ENERGY STAR® 5.0-compliant                  GREENGUARD® certified                  RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
Diskette drive	None											
Media reader	None											
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	None											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU											
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</p>										<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987</li> <li>2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>More accessories on O-M58 sheet</li> </ul> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>											

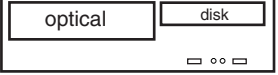
See footnotes for important warranty information  
 US models announced July 14, 2009  
 US models withdrawn effective December 2009

# ThinkCentre® M58 Eco Ultra Small (7359) - XP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro Preload	Global Educ	Avail date
<b>M58</b>	7359-F7U	1x2	Pentium E5500	2.80	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		ES50	No	XP Pro	Jun 10
<b>M58</b>	7359-DUU	1x2	Pentium E6300	2.80	2	2GB	250GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Oct 09
<b>M58</b>	7359-DVU	1x2	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP		ES50	No	XP Pro	Oct 09
<b>M58</b>	7359-DWU	1x2	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Oct 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5500</b> with dual-core, Virtualization Technology, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300</b> with dual-core, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache	<b>Eco Ultra Small</b> 
Implementation	Processor in LGA775 socket	
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle	<i>Some</i> : DisplayPort to Single-link DVI-D Cable	<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant</p>
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1	
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<ul style="list-style-type: none"> <li>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</li> </ul> <p><b>Preloaded applications<sup>5</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• <i>Some</i>: Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	<ul style="list-style-type: none"> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	

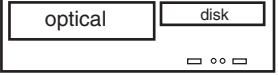
See footnotes for important warranty information  
 US models announced October 22, 2009 or June 1, 2010  
 US models withdrawn effective December 2009 or October 2010

# ThinkCentre® M58 Eco Ultra Small (7359) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date	
M58	7359-F5U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Pro 32	None	Jan 10

- **This model has a 3-year limited warranty<sup>1</sup>**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>9</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical	Bay ② 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, 32-bit PCI 2.3	
DP dongle	DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32	<b>Accessories</b>	43R1990	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>	500GB SATA 3.0Gb/s Disk (7200 rpm) 1TB SATA 3.0Gb/s Disk (7200 rpm) Lenovo Vertical PC and Monitor Stand II DisplayPort to Single-link DVI-D Cable DisplayPort to VGA Monitor Cable More accessories on O-M58 sheet  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	45J7918 41R4474 45J7915 57Y4393	
				<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>
				Supports ThinkVantage® technologies
				EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
				<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

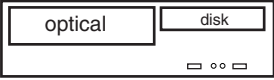
See footnotes for important warranty information  
 US model announced December 15, 2009  
 US model withdrawn effective March 2012

# ThinkCentre® M58 Eco Ultra Small (7637) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
M58	7637-A1U	1x2	Core 2 Duo E7400	2.80	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	G P	Feb 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E7400</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Eco Ultra Small</b>			
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk			
Memory	<b>2GB std</b> , 4GB max <sup>9</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available										Slot 1: Low Profile, 32-bit PCI 2.3			
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>			
DP dongle	DisplayPort to Single-link DVI-D Cable													
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts													
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar													
eSATA port	None													
Diskette drive	None													
Media reader	None												<b>Security</b>	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O												<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0													
Intel AMT	None													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU												EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>													
- Genuine Windows® Vista® Business 32	1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987													
↳ Vista Premium logo	2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988													
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990													
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918													
• Client Security Solution™	USB Portable Diskette Drive 05K9276													
• ThinkVantage Productivity Center	USB 2.0 Lenovo Multimedia Headset 40Y8518													
• ThinkVantage System Update	USB 2.0 Lenovo Webcam 40Y8519													
• ThinkVantage Power Manager	USB 2.0 Essential Memory Key 32GB 45K1258													
• McAfee® VirusScan® Plus (30 days of virus definitions)	USB 2.0 Ultra Secure Memory Key 2GB 45J5916													
• Lenovo System Toolbox	USB 2.0 Ultra Secure Memory Key 4GB 45J5917													
• Adobe® Reader	USB 2.0 Ultra Secure Memory Key 8GB 45J5918													
• Microsoft® Office 2007 Trial (60-day)	USB 2.0 Portable Secure 320GB Hard Disk 43R2019													
• Roxio® Creator® Business Edition (DVD±RW)	USB 2.0 Super Multi-Burner Drive 41N5565													
• Roxio MyDVD® (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620													
• Corel® WinDVD® (DVD±RW)	ThinkVision® L2440x Wide 24" Monitor 4421HB2													
	DisplayPort to Single-link DVI-D Cable 45J7915													
	DisplayPort to VGA Monitor Cable 57Y4393													
	Lenovo Vertical PC and Monitor Stand II 41R4474													
	ThinkCentre Ultra Small Under Desk Mount 40Y8625													
	Ultraslim Wireless Keyboard and Mouse 57Y4700													
	Lenovo USB Fingerprint Keyboard 73P4730													
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074													
	Kensington Cable Lock from Lenovo 73P2582													
	Kensington Twin Head Cable Lock 45K1620													
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>													
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
													<b>Limited Warranty<sup>1</sup></b>	
													↳ <b>3-year parts and labor</b>	
													↳ <b>International Warranty Service<sup>9</sup></b>	
													↳ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
													↳ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>	
													• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)	
													• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)	
													• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)	
													• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)	
													• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)	
													↳ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>	
													↳ <b>Post warranty maintenance services available</b>	
													↳ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
US model announced January 20, 2009  
US model withdrawn effective October 2009

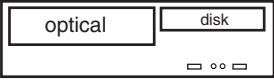


# ThinkCentre® M58 Eco Ultra Small (7637) - GMP (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
<b>M58</b>	7637-A2U	1x2	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	No	Pro 32	G P	Nov 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache		<b>Eco Ultra Small</b> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage® technologies  EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Genuine Windows® 7 Professional 32	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• Rescue and Recovery™	DisplayPort to Single-link DVI-D Cable	45J7915	
• ThinkVantage System Update	DisplayPort to VGA Monitor Cable	57Y4393	
• ThinkVantage Power Manager	Lenovo Vertical PC and Monitor Stand II	41R4474	
• ThinkVantage Toolbox	More accessories on O-M58 sheet		
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Adobe Flash® Player			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			

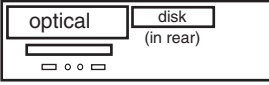
See footnotes for important warranty information  
 US model announced November 3, 2009  
 US model withdrawn effective March 2012

# ThinkCentre® M58 Small (8910) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58</b>	8910-A8U	2x3	Pentium E5200	2.50	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	XP Pro	None	Nov 08
<b>M58</b>	8910-A9U	2x3	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Nov 08
<b>M58</b>	8910-ABU	2x3	Core 2 Quad Q8200	2.33	4	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Nov 08

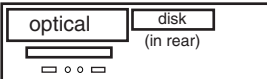
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate stability for small and medium businesses</i></p> <p><b>Intel® Pentium® Dual-Core Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q8200</b> with quad-core, 1333MHz system bus, and 4MB L2 cache</p> <p>Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Small</b></p> 
Implementation	<p>Slot 1: Low Profile, PCI Express 2.0 x16</p> <p>Slot 2: Low Profile, 32-bit PCI 2.3</p>		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, no access, std disk</p> <p>Bay ③ 3.5", .5" high, access, open (reader)</p>
Memory	<p><b>1GB</b> or <b>2GB</b> std, 8GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in two sockets; two sockets available;</p> <p><i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 512MB [<i>1GB models</i>], 1GB [<i>2GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ conn (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display</p>		<p>• Business black color; metal case</p> <p>• 12.5" W X 14.0" D X 3.9" H</p> <p>• 317mm W X 355mm D X 99mm H</p> <p>• 16.5 lb (7.5 kg) in maximum configuration</p> <p>• Toolless cover flips up and tilts backward on rear hinges</p> <p>• Toolless disk, optical drive removal</p> <p>• Toolless adapter retention</p> <p>• Toolless systemboard retention</p> <p>• System floor stand for vertical orientation</p>
SATA disk	<p><b>160GB</b> or <b>250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors on planar</p>		
eSATA port	<p>One external SATA (eSATA) port</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA</p>		
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		Supports ThinkVantage® technologies
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		<p>GREENGUARD® certified</p> <p>RoHS-compliant</p>
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
- Microsoft® Windows® XP Professional with Vista® COA	<p>1GB PC3-8500 DDR3 UDIMM 45J5434</p>		
↔ Disk-to-Disk Recovery (in hidden protected area)	<p>2GB PC3-8500 DDR3 UDIMM 45J5435</p>		
↔ Vista Basic logo	<p>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</p>		
<b>Preloaded applications<sup>5</sup></b>	<p>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</p>		
• Rescue and Recovery™	<p>USB Portable Diskette Drive 05K9276</p>		
• Client Security Solution™	<p>USB 2.0 Lenovo Multimedia Headset 40Y8518</p>		
• ThinkVantage Productivity Center	<p>USB 2.0 Lenovo Webcam 40Y8519</p>		
• Norton Internet Security™ (90 days of virus definitions)	<p>USB 2.0 Essential Memory Key 32GB 45K1258</p>		
• Diskeeper® Home	<p>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</p>		
• PC-Doctor™ (diagnostics)	<p>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</p>		
• Adobe® Reader	<p>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</p>		
• Windows Live™ Toolbar	<p>USB 2.0 Portable 160GB Hard Disk 43R1784</p>		
• Windows Live Search	<p>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</p>		
• Picasa from Google	<p>USB 2.0 Super Multi-Burner Drive 41N5565</p>		
• Microsoft Office 2007 Trial (60-day)	<p>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</p>		
• Multimedia Center for Think Offerings (DVD, DVD±RW)	<p>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</p>		
• Sonic RecordNow and Drive Letter Access (DVD±RW)	<p>ThinkVision® L2440x Wide 24" Monitor 4421HB2</p>		
• Corel® WinDVD® (DVD, DVD±RW)	<p>DisplayPort to Single-link DVI-D Cable 45J7915</p>		
• Corel WinDVD Creator (DVD±RW)	<p>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</p>		
	<p>Lenovo USB Fingerprint Keyboard 73P4730</p>		
	<p>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</p>		
	<p>Kensington Cable Lock from Lenovo 73P2582</p>		
	<p>Kensington Twin Head Cable Lock 45K1620</p>		
	<p>ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636</p>		
	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p>		
	<p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective April 2009

# ThinkCentre® M58 Small (8910) - TopSeller (January 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date														
M58	8910-AFU	2x3	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	XP Pro	None	Jan 09														
M58	8910-AEU	2x3	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Jan 09														
M58	8910-A12	2x3	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Jan 09														
M58	8910-A11	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Feb 09														
M58	8910-AGU	2x3	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Apr 09														
M58	8910-AHU	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Apr 09														
<ul style="list-style-type: none"> <li>• <b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> </ul>																													
Positioning	Ultimate stability for small and medium businesses										<b>Small</b>																		
Processor	Intel® Pentium® Processor E5300 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache										Bay ① 5.25", 1.6" high, access, std optical		Bay ② 3.5", 1" high, no access, std disk																
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										Bay ③ 3.5", .5" high, access, open (reader)		Slot 1: Low Profile, PCI Express 2.0 x16																
Memory	1GB or 2GB std, 8GB max <sup>8</sup> , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; Non-italics: standard memory in one socket; 3 sockets available										Slot 2: Low Profile, 32-bit PCI 2.3		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>																
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (XP Pro models: up to 512MB [1GB models]; Vista models: up to 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display																												
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																												
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive																												
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																												
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																												
eSATA port	One external SATA (eSATA) port																												
Diskette drive	None																												
Media reader	None																												
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																												
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA																												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																												
Speaker	One internal speaker for business audio																												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																												
Intel AMT	None																												
Modem	None																												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																												
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs																												
<b>Preloaded operating system<sup>20</sup></b> - Some: Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business) - Some: Genuine Windows Vista Business 32 † Vista models: Vista Premium logo <b>Preloaded applications<sup>5</sup> (all OSes)</b> • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • ThinkVantage Power Manager (Vista) • McAfee® VirusScan® Plus (30 days of virus definitions) • Lenovo System Toolbox • Adobe® Reader • Microsoft® Office 2007 Trial (60-day) • Roxio® Creator® Business Edition (DVD±RW) • Roxio MyDVD® (DVD±RW) • Corel® WinDVD® (DVD, DVD±RW)										<b>Accessories</b> 1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2440x Wide 24" Monitor 4421HB2 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Lenovo USB Fingerprint Keyboard 73P4730 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 Kensington Twin Head Cable Lock 45K1620 ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® Quadro® 256MB FX 370 LP 55Y9275 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>						Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant			
<b>Limited Warranty<sup>1</sup></b> ⇨ 3-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ Post warranty maintenance services available ⇨ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378																													

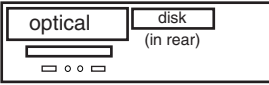
See footnotes for important warranty information  
 US models announced January 20, February 12, or April 7, 2009  
 US models withdrawn effective April or August 2009

# ThinkCentre® M58 Small (8910) - TopSeller (June 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58</b>	8910-E3U	2x3	Pentium E5300	2.60	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Aug 09
<b>M58</b>	8910-AJU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Jul 09
<b>M58</b>	8910-E4U	2x3	Core 2 Duo E7500	2.93	2	2GB	320GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Aug 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<b>Small</b>	
Implementation											Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening											<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors											
eSATA port	One external SATA (eSATA) port											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	None											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs										Supports ThinkVantage® technologies	
<b>Preloaded operating system</b> <sup>20</sup>						<b>Accessories</b>						GREENGUARD® certified RoHS-compliant
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)						1GB PC3-8500 DDR3 UDIMM	45J5434					<p align="center"><b>Limited Warranty</b><sup>1</sup></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service</b><sup>9</sup></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
						2GB PC3-8500 DDR3 UDIMM	45J5435					
						500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990					
						1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918					
						Super Multi-Burner DL DVD±RW SATA Drive	41N5620					
						DisplayPort to Single-link DVI-D Cable	45J7915					
						DisplayPort to VGA Monitor Cable	57Y4393					
						ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962					
						ATI Radeon HD 3470 256MB (DP, VGA)	45K1636					
						NVIDIA® Quadro® 256MB NVS 290	43R1765					
						NVIDIA Quadro 256MB FX 370 LP	55Y9275					
						More accessories on O-M58 sheet						
						Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>						
						Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>						


See footnotes for important warranty information  
US models announced June 16 or July 14, 2009  
US models withdrawn effective August or November 2009

# ThinkCentre® M58 Small (8910) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>9</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Chassis intr switch	Intel vPro	Global Preload	Educ	Avail date
M58	8910-APU	2x3	Pentium E5400	2.70	2	2GB	250GB <sup>2</sup> DVD±RW	GMA	VGA, DP	None	None	No	No	XP Pro	No	Jan 10
M58	8910-ALU	2x3	Pentium E6300	2.80	2	2GB	250GB DVD±RW	GMA	VGA, DP	None	Switch	No	No	XP Pro	No	Nov 09
M58	8910-AMU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB DVD±RW	GMA	VGA, DP	None	None	No	No	XP Pro	No	Nov 09
M58	8910-ATU	2x3	Core 2 Quad Q9500	2.83	4	4GB	320GB DVD±RW	GMA	VGA, DP	None	None	No	No	XP Pro	No	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Processor E5400</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300</b> with <b>dual-core</b>, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9500</b> with <b>quad-core</b>, 1333MHz system bus, and 6MB L2 cache</p> <p>Processor in LGA775 socket</p>		<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16                  Slot 2: Low Profile, 32-bit PCI 2.3</p>																										
Implementation			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p>																										
Memory	<p><b>2GB</b> or <b>4GB</b> std, 16GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>																												
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display</p>																												
SATA disk	<p><b>250GB</b> or <b>320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																												
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>																												
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																												
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors on planar</p>																												
eSATA port	<p>One external SATA (eSATA) port</p>																												
Diskette drive	<p>None</p>																												
Media reader	<p>None</p>																												
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>																												
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																												
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA</p>																												
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>																												
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>																												
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>																												
Speaker	<p>One internal speaker for business audio</p>																												
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>																												
Intel AMT	<p>None</p>																												
Modem	<p>None</p>																												
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>																												
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																												
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																												
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>																												
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</td> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td></td> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td></td> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td></td> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td></td> <td>More accessories on O-M58 sheet</td> <td></td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM	45J5434		2GB PC3-8500 DDR3 UDIMM	45J5435		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		DisplayPort to Single-link DVI-D Cable	45J7915		DisplayPort to VGA Monitor Cable	57Y4393		NVIDIA® Quadro® 256MB NVS 290	43R1765		More accessories on O-M58 sheet	
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM	45J5434																											
	2GB PC3-8500 DDR3 UDIMM	45J5435																											
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	DisplayPort to VGA Monitor Cable	57Y4393																											
	NVIDIA® Quadro® 256MB NVS 290	43R1765																											
	More accessories on O-M58 sheet																												
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																												
<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																													

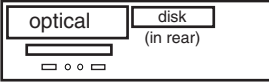
See footnotes for important warranty information  
 US models announced November 3, 2009, December 15, 2009, or February 23, 2010  
 US models withdrawn effective January or October 2010

# ThinkCentre® M58 Small (8910) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	8910-AQU	2x3	Pentium E5400	2.70	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-B4U	2x3	Pentium E5700	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Oct 10
M58	8910-ARU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	8910-AUU	2x3	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Mar 10
M58	8910-ASU	2x3	Core 2 Duo E7500	2.93	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 64	None	Mar 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Pentium® Processor E5400 or E5700 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9500 with quad-core,</b> 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		Small	
Implementation	Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB or 4GB std,</b> 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500),</b> integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB or 320GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435		
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
	DisplayPort to Single-link DVI-D Cable	45J7915		
	DisplayPort to VGA Monitor Cable	57Y4393		
	More accessories on O-M58 sheet			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Rescue and Recovery™				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

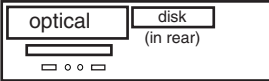
See footnotes for important warranty information  
US models announced January 12, February 23, or September 28, 2010  
US models withdrawn effective March 2012

# ThinkCentre® M58 Small (7360) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Vista preload	Global Educ	Avail date
M58	7360-AJU	2x3	Pentium E2200	2.20	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		No	Bus32	No	Nov 08
M58	7360-ADU	2x3	Pentium E2220	2.40	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	Bus32	No	Nov 08
M58	7360-AKU	2x3	Pentium E5200	2.50	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	Bus32	No	Nov 08
M58	7360-ALU	2x3	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD	GMA	VGA, DP		No	Bus32	No	Nov 08
M58	7360-APU	2x3	Core 2 Duo E7300	2.66	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	Bus32	No	Nov 08
M58	7360-AQU	2x3	Core 2 Duo E7300	2.66	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	No	Bus32	No	Nov 08
M58	7360-ARU	2x3	Core 2 Quad Q8200	2.33	4	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	No	Bus32	No	Nov 08

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Dual-Core Processor E2200</b> or <b>E2220</b> with <b>dual-core</b> , 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium Dual-Core Processor E5200</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q8200</b> with <b>quad-core</b> , 1333MHz system bus, and 4MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16* Slot 2: Low Profile, 32-bit PCI 2.3	
Memory	<b>1GB</b> or <b>2GB</b> std, 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	* used in some models	
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable		<b>Security</b>
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	One external SATA (eSATA) port		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		Supports ThinkVantage® technologies
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ↳ Vista Premium logo	<b>Accessories</b>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L2440x Wide 24" Monitor 4421HB2</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 LP 55Y9275</li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
			<ul style="list-style-type: none"> <li>↳ <b>3-year parts and labor</b></li> <li>↳ <b>International Warranty Service<sup>9</sup></b></li> <li>↳ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↳ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↳ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↳ <b>Post warranty maintenance services available</b></li> <li>↳ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

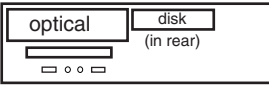
See footnotes for important warranty information  
US models announced October 21, 2008  
US models withdrawn effective June, August, or October 2009

# ThinkCentre® M58 Small (7360) - January 2009 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7360-D8U	2x3	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	DP-to-DVI-D	No	XP Pro		Apr 09
M58	7360-BVU	2x3	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	XP Pro		Feb 09
M58	7360-BWU	2x3	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD	GMA	VGA, DP		No	XP Pro		Feb 09
M58	7360-D4U	2x3	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD±RW	GMA	VGA, DP		No	XP Pro		Feb 09
M58	7360-D1U	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	XP Pro		Feb 09
M58	7360-D5U	2x3	Core 2 Duo E7400	2.80	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	No	XP Pro		Feb 09
M58	7360-D2U	2x3	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD	GMA	VGA, DP		No	XP Pro		Feb 09
M58	7360-D3U	2x3	Core 2 Duo E7500	2.93	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	XP Pro		Feb 09
M58	7360-D6U	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	No	XP Pro		Feb 09
M58	7360-D7U	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	No	Bus32	Gbl	Feb 09

• **These models have a 3-year limited warranty<sup>1</sup>**


Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Small</b>	
Processor	<b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> or <b>E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket											
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std, 16GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Slot 1: Low Profile, PCI Express 2.0 x16* Slot 2: Low Profile, 32-bit PCI 2.3 * used in some models	
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory ( <i>XP Pro:</i> up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]; <i>Vista:</i> up to 765MB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable											
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support											
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant <b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar											
eSATA port	One external SATA (eSATA) port											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	None											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosenesing, two diagnostic LEDs											
<b>Preloaded operating system<sup>20</sup></b>						<b>Accessories</b>						
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)						1GB PC3-8500 DDR3 UDIMM					45J5434	
- <i>Some:</i> Genuine Windows Vista Business 32						2GB PC3-8500 DDR3 UDIMM					45J5435	
◇ <i>Vista models:</i> Vista Premium logo						500GB SATA 3.0Gb/s Disk (7200 rpm)					43R1990	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)						1TB SATA 3.0Gb/s Disk (7200 rpm)					45J7918	
• Rescue and Recovery™						DVD-ROM DL SATA 1.5Gb/s 16X-48X Max					41N5618	
• Client Security Solution™						Super Multi-Burner DL DVD±RW SATA Drive					41N5620	
• ThinkVantage Productivity Center						DisplayPort to Single-link DVI-D Cable					45J7915	
• ThinkVantage Power Manager (Vista)						DisplayPort to VGA Monitor Cable					57Y4393	
• McAfee® VirusScan® Plus (30-day)						NVIDIA® Quadro® 256MB NVS 290					43R1765	
• Roxio® Creator® Business Edition (DVD±RW)						More accessories on O-M58 sheet						
• Roxio MyDVD® (DVD±RW)						Acc Guide in pdf <a href="#">lenovo.com/accessoriesguide</a>						
• Corel® WinDVD® (DVD, DVD±RW)						Other accessories at <a href="#">lenovo.com/accessories</a>						

See footnotes for important warranty information  
 US models announced January 20 or April 7, 2009  
 US models withdrawn effective October 2009, December 2009, April 2010, or October 2010



Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7360-E1U	2x3	Pentium E5300	2.60	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Aug 09
M58	7360-E2U	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Aug 09
M58	7360-D9U	2x3	Core 2 Quad Q8200	2.33	4	2GB	160GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Jul 09

- *These models have a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q8200</b> with quad-core, 1333MHz system bus, and 4MB L2 cache	<b>Small</b> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available	<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable	
DP dongle	<i>Some</i> : DisplayPort to Single-link DVI-D Cable	
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	One external SATA (eSATA) port	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM 45J5434	
<b>Preloaded applications<sup>5</sup></b>	2GB PC3-8500 DDR3 UDIMM 45J5435	
• <i>Some</i> : Education software	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
- VitalSource™ Library School Edition	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
- Adobe® Elements	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
- Photoshop Elements 6	DisplayPort to Single-link DVI-D Cable 45J7915	
- Premiere Elements 4	DisplayPort to VGA Monitor Cable 57Y4393	
• Rescue and Recovery™	ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962	
• Client Security Solution™	ATI Radeon HD 3470 256MB (DP, VGA) 45K1636	
• ThinkVantage Productivity Center	NVIDIA® Quadro® 256MB NVS 290 43R1765	
• ThinkVantage System Update	NVIDIA Quadro 256MB FX 370 LP 55Y9275	
• McAfee® VirusScan® Plus (30 days of virus definitions)	More accessories on O-M58 sheet	
• Lenovo System Toolbox	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Adobe Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD±RW)		


See footnotes for important warranty information  
 US models announced June 16 or July 14, 2009  
 US models withdrawn effective October or December 2009

# ThinkCentre® M58 Small (7360) - XP with Win 7 License - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7360-EQU	2x3	Pentium E5500	2.80	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	XP Pro		Jun 10
M58	7360-EFU	2x3	Pentium E6300	2.80	2	1GB	250GB	DVD	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro		Nov 09
M58	7360-EDU	2x3	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro		Nov 09
M58	7360-EGU	2x3	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Nov 09
M58	7360-EPU	2x3	Core 2 Duo E7600	3.06	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Jun 10
M58	7360-DBU	2x3	Core 2 Quad Q8400	2.66	4	2GB	250GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Nov 09
M58	7360-ECU	2x3	Core 2 Quad Q8400	2.66	4	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	None	XP Pro		Nov 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® Processor E5500</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300</b> with <b>dual-core</b>, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7600</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q8400</b> with <b>quad-core</b>, 1333MHz system bus, and 4MB L2 cache</p> <p>Processor in LGA775 socket</p>		<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16*                  Slot 2: Low Profile, 32-bit PCI 2.3</p>
Implementation			
Memory	<p><b>1GB</b> or <b>2GB</b> std, 16GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>		<p>* used in some models</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 512MB [<i>1GB models</i>], 1GB [<i>2GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display</p> <p><i>Some:</i> <b>ATI™ Radeon™ HD 3470</b>, PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts</p>		
DP dongle	<p><i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>		
SATA disk	<p><b>250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>		
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors on planar</p>		
eSATA port	<p>One external SATA (eSATA) port</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA</p>		
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>280 watts with variable speed fan, autosensing, two diagnostic LEDs</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</p>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30-day)</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>		
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
			<p>Supports ThinkVantage® technologies</p>
			<p>GREENGUARD® certified RoHS-compliant</p>
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced October 22, 2009 or June 1, 2010  
 US models withdrawn effective December 2009 or October 2010

# ThinkCentre® M58 Small (7360) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	7360-EUU	2x3	Pentium E5700	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Oct 10
M58	7360-EVU	2x3	Pentium E6700	3.20	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Dec 10
M58	7360-EHU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	Pro 32	None	Jan 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5700 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6700 with dual-core</b> , 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache		<b>Small</b>	
Implementation	Processor in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle				
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			
				<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
				Supports ThinkVantage® technologies
				GREENGUARD® certified RoHS-compliant
				<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

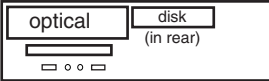
See footnotes for important warranty information  
 US models announced December 15, 2009, September 14, 2010, or November 30, 2010  
 US models withdrawn effective March 2012

# ThinkCentre® M58 Small (6258) - ENERGY STAR® 5.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
M58	6258-A7U	2x3	Celeron E1200	1.60	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		ES50	No	Bus32	No	Nov 08
M58	6258-A8U	2x3	Pentium E2200	2.20	2	1GB	160GB	DVD	GMA	VGA, DP		ES50	No	Bus32	No	Nov 08
M58	6258-A9U	2x3	Pentium E5200	2.50	2	1GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Nov 08
M58	6258-ABU	2x3	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD	GMA	VGA, DP		ES50	No	Bus32	No	Nov 08
M58	6258-ACU	2x3	Core 2 Duo E7300	2.66	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Nov 08
M58	6258-ADU	2x3	Core 2 Duo E7300	2.66	2	2GB	250GB	DVD±RW	3470	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Nov 08
M58	6258-AEU	2x3	Core 2 Quad Q8200	2.33	4	2GB	250GB	DVD±RW	3470	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	No	Nov 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Celeron® Dual-Core Processor E1200</b> with dual-core, 800MHz system bus, and 512KB L2 cache or  <b>Intel Pentium® Dual-Core Processor E2200</b> with dual-core, 800MHz system bus, and 1MB L2 cache or  <b>Intel Pentium Dual-Core Processor E5200</b> with dual-core, 800MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7300</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or  <b>Intel Core 2 Quad Processor Q8200</b> with quad-core, 1333MHz system bus, and 4MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>		<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16*                      Slot 2: Low Profile, 32-bit PCI 2.3</p> <p>* used in some models</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p>
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display</p> <p><i>Some:</i> <b>ATI™ Radeon™ HD 3470</b>, PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts</p>		
DP dongle	<p><i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>		<p>Climate Savers®-compliant                      EPEAT™ Gold rating                      ENERGY STAR 5.0-compliant                      GREENGUARD® certified                      RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>		
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors on planar</p>		
eSATA port	<p>One external SATA (eSATA) port</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA</p>		
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>280 watts with variable speed fan, autosensing, 85% PSU</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		
- Genuine Windows® Vista® Business 32	1GB PC3-8500 DDR3 UDIMM	45J5434	
↔ Vista Premium logo	2GB PC3-8500 DDR3 UDIMM	45J5435	
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• Client Security Solution™	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	
• ThinkVantage Productivity Center	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• ThinkVantage Power Manager	ThinkVision® L2440x Wide 24" Monitor	4421HB2	
• McAfee® VirusScan® Plus (30-day)	DisplayPort to Single-link DVI-D Cable	45J7915	
• Lenovo System Toolbox	DisplayPort to VGA Monitor Cable	57Y4393	
• Adobe® Reader	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
• Microsoft® Office 2007 Trial (60-day)	Kensington Cable Lock from Lenovo	73P2582	
• Roxio® Creator® Business Edition (DVD±RW)	ATI Radeon HD 2400 XT 256MB	43R1962	
• Roxio MyDVD® (DVD±RW)	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	
• Corel® WinDVD® (DVD, DVD±RW)	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	NVIDIA Quadro 256MB FX 370 LP	55Y9275	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

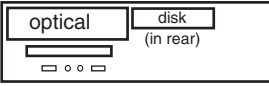
See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective June, August, or October 2009

# ThinkCentre® M58 Small (6258) - ES 5.0 (January 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
M58	6258-AJU	2x3	Pentium E5300	2.60	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	6258-AKU	2x3	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD	GMA	VGA, DP		ES50	No	XP Pro	Feb 09
M58	6258-AMU	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	6258-APU	2x3	Core 2 Duo E7400	2.80	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	6258-ALU	2x3	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD	GMA	VGA, DP		ES50	No	XP Pro	Feb 09
M58	6258-ANU	2x3	Core 2 Duo E7500	2.93	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	6258-AQU	2x3	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	Feb 09
M58	6258-ASU	2x3	Pentium E5300	2.60	2	1GB	160GB	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	Apr 09
M58	6258-ARU	2x3	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	Bus32	Gbl Feb 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache		<b>Small</b> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		
Memory	<b>1GB or 2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16* Slot 2: Low Profile, 32-bit PCI 2.3 * used in some models
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory ( <i>XP Pro:</i> up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]; <i>Vista:</i> up to 253MB [ <i>1GB model</i> ], 765MB [ <i>2GB model</i> ]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	One external SATA (eSATA) port		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> 1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<ul style="list-style-type: none"> <li>- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</li> <li>- <i>Some:</i> Genuine Windows Vista Business 32</li> <li>◇ <i>Vista models:</i> Vista Premium logo</li> </ul> <b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager (Vista)</li> <li>• McAfee® VirusScan® Plus (30-day)</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>			
	<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b>		

See footnotes for important warranty information  
 US models announced January 20 or April 7, 2009  
 US models withdrawn effective October 2009, December 2009, or October 2010

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro Preload	Global Educ	Avail date		
M58	6258-AUU	2x3	Core 2 Quad Q8200	2.33	4	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	None	XP Pro	None	Jul 09

- *This model has a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Quad Processor Q8200</b> with <b>quad-core</b> , 1333MHz system bus, and 4MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	None			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage® technologies  Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM 45J5434			
<b>Preloaded applications<sup>5</sup></b>	2GB PC3-8500 DDR3 UDIMM 45J5435			
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
• Client Security Solution™	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
• ThinkVantage Productivity Center	USB 2.0 Lenovo Multimedia Headset 40Y8518			
• ThinkVantage System Update	USB 2.0 Essential Memory Key 32GB 40Y8519			
• McAfee® VirusScan® Plus (30 days of virus definitions)	USB 2.0 Ultra Secure Memory Key 8GB 45K1258			
• Lenovo System Toolbox	USB 2.0 Portable Secure 320GB Hard Disk 45J5918			
• Adobe® Reader	Super Multi-Burner DL DVD±RW SATA Drive 43R2019			
• Microsoft® Office 2007 Trial (60-day)	ThinkVision® L2440x Wide 24" Monitor 41N5620			
• Roxio® Creator® Business Edition (DVD±RW)	ThinkVision® L2440x Wide 24" Monitor 4421HB2			
• Roxio MyDVD® (DVD±RW)	Ultraslim Wireless Keyboard and Mouse 57Y4700			
• Corel® WinDVD® (DVD±RW)	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074			
	Kensington Twin Head Cable Lock 45K1620			
	DisplayPort to Single-link DVI-D Cable 45J7915			
	DisplayPort to VGA Monitor Cable 57Y4393			
	ATI™ Radeon™ HD 2400 XT 256MB 43R1962			
	ATI Radeon HD 3470 256MB (DP, VGA) 45K1636			
	NVIDIA® Quadro® 256MB NVS 290 43R1765			
	NVIDIA Quadro 256MB FX 370 LP 55Y9275			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

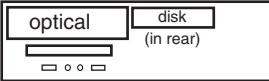
See footnotes for important warranty information  
 US model announced June 16, 2009  
 US model withdrawn effective October 2009

# ThinkCentre® M58 Small (6258) - ES 5.0 (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
M58	6258-B1U	2x3	Pentium E6300	2.80	2	1GB	250GB <sup>2</sup>	DVD	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	No	Oct 09
M58	6258-AWU	2x3	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	No	Oct 09
M58	6258-AVU	2x3	Core 2 Quad Q8400	2.66	4	2GB	250GB	DVD±RW	GMA	VGA, DP		ES50	No	XP Pro	No	Oct 09

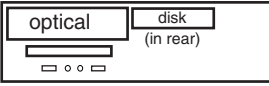
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Pentium® Processor E6300 with dual-core</b> , Virtualization Technology, 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Quad Processor Q8400 with quad-core</b> , Virtualization Technology, 1333MHz system bus, and 4MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in LGA775 socket	
Memory	<b>1GB or 2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available	Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1	
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	One external SATA (eSATA) port	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	None	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosenensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58 sheet	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• ThinkVantage System Update		
• McAfee® VirusScan® Plus (30 days of virus definitions)		
• Lenovo System Toolbox		
• Adobe® Reader®		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		
		<b>Security</b>
		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
		Supports ThinkVantage® technologies
		Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
		<b>Limited Warranty<sup>1</sup></b>
		<ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>

See footnotes for important warranty information  
US models announced October 22, 2009  
US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global Educ	Avail date
M58	6258-D9U	2x3	Pentium E5700	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Oct 10
M58	6258-DAU	2x3	Pentium E6700	3.20	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Dec 10
M58	6258-D7U	2x3	Core 2 Duo E7600	3.06	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Jun 10
M58	6258-DBU	2x3	Core 2 Duo E7600	3.06	2	2GB	250GB	DVD±RW	GMA	VGA, DP	None	ES50	None	Pro 32	None	Oct 10

- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Pentium® Processor E5700</b> with dual-core, 800MHz system bus, and 2MB L2 cache or  <b>Intel Pentium Processor E6700</b> with dual-core, 1066MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7600</b> with dual-core, Virtualization Technology, 1066MHz system bus, and 3MB L2 cache                      Processor in LGA775 socket</p>		<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16                      Slot 2: Low Profile, 32-bit PCI 2.3</p>
Implementation	<p>Processor in LGA775 socket</p>		<p>Slot 1: Low Profile, PCI Express 2.0 x16                      Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Memory	<p><b>1GB or 2GB std</b>, 16GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 512MB [<i>1GB models</i>] or 765MB [<i>2GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>Climate Savers®-compliant                      EPEAT™ Gold rating                      ENERGY STAR® 5.0-compliant                      GREENGUARD® certified                      RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></li> </ul>
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1</p>		
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA cables	<p>Two SATA cables (each 1-drop to device), two SATA connectors</p>		
eSATA port	<p>One external SATA (eSATA) port</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA</p>		
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>		
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>		
Speaker	<p>One internal speaker for business audio</p>		
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>280 watts with variable speed fan, autosensing, 85% PSU</p>		
Preloaded operating system <sup>20</sup>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32 45J5435</li> <li>2GB PC3-8500 DDR3 UDIMM 43R1990</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7915</li> <li>DisplayPort to Single-link DVI-D Cable 57Y4393</li> <li>DisplayPort to VGA Monitor Cable</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
Preloaded applications <sup>5</sup> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>		

See footnotes for important warranty information  
 US models announced June 1, September 14, or November 30, 2010  
 US models withdrawn effective March 2012




# ThinkCentre® M58 Small (7638) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58</b>	7638-A1U	2x3	Core 2 Duo E7300	2.66	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	Bus32	G P	Jan 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E7300</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Small</b> 
Implementation	Processor in FC-LGA8 package in LGA775 socket										
Memory	<b>1GB std</b> , 8GB max <sup>6</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1										
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors										
eSATA port	One external SATA (eSATA) port										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable)                             <ul style="list-style-type: none"> <li>- optional cable also locks the cover by deactivating the cover release buttons</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0										
Intel AMT	None										
Modem	None										
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs										
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ↕ Vista Premium logo										
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Corel® WinDVD® (DVD)</li> </ul>										
<b>Accessories</b>	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 ThinkVision® L2440x Wide 24" Monitor 4421HB2 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 Kensington Twin Head Cable Lock 45K1620 ATI™ Radeon™ HD 2400 XT 256MB 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® Quadro® 256MB FX 370 LP 55Y9275 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										
											Supports ThinkVantage® technologies
											GREENGUARD® certified RoHS-compliant
											<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

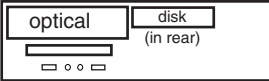
See footnotes for important warranty information  
 US model announced December 9, 2008  
 US model withdrawn effective August 2009

# ThinkCentre® M58 Small (7638) - GMP (Aug 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58</b>	7638-A2U	2x3	Core 2 Duo E7500	2.93	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	Bus32	G P	Aug 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache										Small	
Implementation	Processor in FC-LGA8 package in LGA775 socket											
Memory	<b>1GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Bay ② 3.5", 1" high, no access, std disk	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										Bay ③ 3.5", .5" high, access, open (reader)	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1										Slot 1: Low Profile, PCI Express 2.0 x16	
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										Slot 2: Low Profile, 32-bit PCI 2.3	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors										• Business black color; metal case	
eSATA port	One external SATA (eSATA) port										• 12.5" W X 14.0" D X 3.9" H	
Diskette drive	None										• 317mm W X 355mm D X 99mm H	
Media reader	None										• 16.5 lb (7.5 kg) in maximum configuration	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										• Toolless cover flips up and tilts backward on rear hinges	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										• Toolless disk, optical drive removal	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA										• Toolless adapter retention	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										• Toolless systemboard retention	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										• System floor stand for vertical orientation	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	None											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs											
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>											
- Genuine Windows® Vista® Business 32	1GB PC3-8500 DDR3 UDIMM										45J5434	
↳ Vista Premium logo	2GB PC3-8500 DDR3 UDIMM										45J5435	
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm)										43R1990	
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)										45J7918	
• Client Security Solution™	DVD-ROM DL SATA 1.5Gb/s 16-48X Max										41N5618	
• ThinkVantage Productivity Center	DisplayPort to Single-link DVI-D Cable										45J7915	
• ThinkVantage System Update	DisplayPort to VGA Monitor Cable										57Y4393	
• ThinkVantage Power Manager	More accessories on O-M58 sheet											
• McAfee® VirusScan® Plus (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>											
• Lenovo System Toolbox	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											
• Adobe® Reader®												
• Microsoft Office 2010 preloaded; purchase product key to activate												
• Corel® WinDVD® (DVD)												
												Supports ThinkVantage® technologies
												GREENGUARD® certified RoHS-compliant
												<b>Limited Warranty<sup>1</sup></b>
												↳ <b>3-year parts and labor</b>
												↳ <b>International Warranty Service<sup>9</sup></b>
												↳ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>
												↳ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>
												• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)
												• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)
												• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)
												↳ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>
												↳ <b>Post warranty maintenance services available</b>
												↳ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

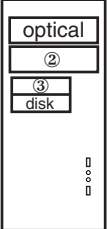
See footnotes for important warranty information  
US model announced July 14, 2009  
US model withdrawn effective August 2011

# ThinkCentre® M58 Tower (9960) - TopSeller - withdrawn

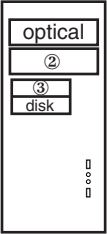
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>3</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	9960-A8U	4x4	Pentium E5200	2.50	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	XP Pro	None	Nov 08
M58	9960-A9U	4x4	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Nov 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Ultimate stability for small and medium businesses</i></p> <p><b>Intel® Pentium® Dual-Core Processor E5200 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache</p>							<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>				
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket							<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>				
Memory	<p><b>1GB, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>							<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>				
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500),</b> integrated graphics in Q45, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display</p>											
SATA disk	<p><b>160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>											
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1</p>											
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>											
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>											
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar</p>											
eSATA port	None											
Diskette drive	None											
Media reader	None									<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>											
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>											
Rear ports	<p>Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>											
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>											
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>											
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>											
Speaker	<p>One internal speaker for business audio</p>											
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>											
Intel AMT	None											
Modem	None											
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>									<p>Supports ThinkVantage® technologies</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>											
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>									<p>GREENGUARD® certified</p> <p>RoHS-compliant</p>		
Power supply	<p>280 watts with variable speed fan, manual switch, two diagnostic LEDs</p>											
<b>Preloaded operating system<sup>20</sup></b>			<b>Accessories</b>								<b>Limited Warranty<sup>1</sup></b>	
- Microsoft® Windows® XP Professional with Vista® COA			1GB PC3-8500 DDR3 UDIMM		45J5434						↔ <b>3-year parts and labor</b>	
↔ Disk-to-Disk Recovery (in hidden protected area)			2GB PC3-8500 DDR3 UDIMM		45J5435						↔ <b>International Warranty Service<sup>9</sup></b>	
↔ Vista Basic logo			500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990						↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
<b>Preloaded applications<sup>5</sup></b>			1TB SATA 3.0Gb/s Disk (7200 rpm)		45J7918						↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>	
• Rescue and Recovery™			USB 2.0 Lenovo Multimedia Headset		40Y8518						• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)	
• Client Security Solution™			USB 2.0 Lenovo Webcam		40Y8519						• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)	
• ThinkVantage Productivity Center			USB 2.0 Essential Memory Key 32GB		45K1258						• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)	
• Norton Internet Security™ (90 days of virus definitions)			USB 2.0 Ultra Secure Memory Key 4GB		45J5917						• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)	
• Diskkeeper® Home			USB 2.0 Ultra Secure Memory Key 8GB		45J5918						• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)	
• PC-Doctor™ (diagnostics)			USB 2.0 Portable Secure 320GB Hard Disk		43R2019						↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b>	
• Adobe® Reader			DVD-ROM DL SATA 1.5Gb/s 16-48X Max		41N5618						↔ <b>Post warranty maintenance services available</b>	
• Windows Live™ Toolbar			Super Multi-Burner DL DVD±RW SATA Drive		41N5620						↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	
• Windows Live Search			Blu-ray™ Burner SATA 1.5Gb/s Drive		45K1675							
• Picasa from Google			ThinkVision® L2440x Wide 24" Monitor		4421HB2							
• Microsoft Office 2007 Trial (60-day)			DisplayPort to Single-link DVI-D Cable		45J7915							
• Multimedia Center for Think Offerings (DVD, DVD±RW)			Wireless Kbd & Opt Wheel Mouse (via USB)		73P4067							
• Sonic RecordNow and Drive Letter Access (DVD±RW)			Lenovo USB Fingerprint Keyboard		73P4730							
• Corel® WinDVD® (DVD, DVD±RW)			Laser Tilt Wheel Mouse (USB, PS/2)		41U3074							
• Corel WinDVD Creator (DVD±RW)			Kensington Cable Lock from Lenovo		73P2582							
			Kensington Twin Head Cable Lock		45K1620							
			ATI™ Radeon™ HD 3470 256MB (DP, VGA)		45K1636							
			NVIDIA® GeForce® 9500GT 512MB (DP, DVI)		45K1635							
			NVIDIA Quadro® 256MB FX 370		43R1766							
			NVIDIA Quadro 512MB FX 1700		43R1767							
			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>									
			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>									

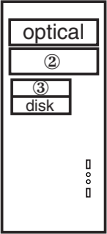
See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective April 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>5</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date	
M58	9960-ADU	4x4	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None	None	XP Pro	None	Jan 09	
M58	9960-AEU	4x4	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Jan 09	
M58	9960-AFU	4x4	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Jan 09	
M58	9960-AGU	4x4	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Jan 09	
M58	9960-A71	4x4	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Feb 09	
M58	9960-AHU	4x4	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	None	Bus32	None	Apr 09	
<ul style="list-style-type: none"> <li>• These small and medium business (SMB) models are part of the US TopSeller™ Program</li> <li>• These models have a 3-year limited warranty<sup>1</sup></li> </ul>																
Positioning	Ultimate stability for small and medium businesses										Tower					
Processor	Intel® Pentium® Processor E5300 with dual-core, 800MHz system bus, and 2MB L2 cache or Intel Core™ 2 Duo Processor E7400 or E7500 with dual-core, 1066MHz system bus, and 3MB L2 cache										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>		<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</li> <li>Slot 2: half-length, full-height, PCIe x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>			
Memory	1GB or 2GB, 8GB max <sup>3</sup> , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Security		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>			
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory ( <i>XP Pro models</i> : up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]; <i>Vista models</i> : up to 765MB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Supports ThinkVantage® technologies					
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts															
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1															
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive															
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive															
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar															
eSATA port	None															
Diskette drive	None															
Media reader	None															
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O															
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec															
Speaker	One internal speaker for business audio															
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0															
Intel AMT	None															
Modem	None															
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										GREENGUARD® certified					
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo										RoHS-compliant					
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs															
<b>Preloaded operating system<sup>20</sup></b>						<b>Accessories</b>						<b>Limited Warranty<sup>1</sup></b>				
- <i>Some</i> : Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)						1GB PC3-8500 DDR3 UDIMM 45J5434						<ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>				
- <i>Some</i> : Genuine Windows Vista Business 32						1TB SATA 3.0Gb/s Disk (7200 rpm) 43R1990										
♦ <i>Vista models</i> : Vista Premium logo						USB 2.0 Lenovo Multimedia Headset 45J7918										
<b>Preloaded applications<sup>5</sup> (all OSes)</b>						USB 2.0 Lenovo Webcam 40Y8518										
• Rescue and Recovery™						USB 2.0 Essential Memory Key 32GB 45K1258										
• Client Security Solution™						USB 2.0 Ultra Secure Memory Key 8GB 45J5918										
• ThinkVantage Productivity Center						USB 2.0 Portable 160GB Hard Disk 43R1784										
• ThinkVantage System Update						USB 2.0 Portable Secure 320GB Hard Disk 43R2019										
• ThinkVantage Power Manager (Vista)						DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618										
• McAfee® VirusScan® Plus (30 days of virus definitions)						Super Multi-Burner DL DVD±RW SATA Drive 41N5620										
• Lenovo System Toolbox						Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675										
• Adobe® Reader						ThinkVision® L2440x Wide 24" Monitor 4421HB2										
• Microsoft® Office 2007 Trial (60-day)						DisplayPort to Single-link DVI-D Cable 45J7915										
• Roxio® Creator® Business Edition (DVD±RW)						DisplayPort to VGA Monitor Cable 57Y4393										
• Roxio MyDVD® (DVD±RW)						Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067										
• Corel® WinDVD® (DVD, DVD±RW)						Laser Tilt Wheel Mouse (USB, PS/2) 41U3074										
						Kensington Twin Head Cable Lock 45K1620										
						ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636										
						NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635										
						NVIDIA Quadro® 256MB FX 370 Full-Height 43R1766										
						NVIDIA Quadro 512MB FX 1700 43R1767										
						Acc Guide in pdf lenovo.com/accessoriesguide										
						Other accessories at lenovo.com/accessories										

See footnotes for important warranty information  
 US models announced January 20, February 12, or April 7, 2009  
 US models withdrawn effective April or August 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	9960-AJU	4x4	Core 2 Duo E7500	2.93	2	2GB	320GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Aug 09

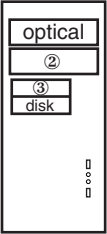
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										<b>Tower</b>		
Processor	<b>Intel® Core™ 2 Duo Processor E7500 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Memory	<b>2GB std, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500),</b> integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display												
SATA disk	<b>320GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0												
Intel AMT	None												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										Supports ThinkVantage® technologies		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo										GREENGUARD® certified		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs										RoHS-compliant		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>												
<b>Accessories</b>	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635 NVIDIA Quadro® 256MB NVS 290 43R1765 NVIDIA Quadro 256MB NVS 295 45K1669 More accessories on O-M58 sheet  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												

See footnotes for important warranty information  
 US model announced July 14, 2009  
 US model withdrawn effective November 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	9960-AKU	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Nov 09
M58	9960-ANU	4x4	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	XP Pro	None	Mar 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9500</b> with quad-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 																																						
Implementation	Processor in LGA775 socket																																								
Memory	<b>2GB</b> or <b>4GB std.</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																																						
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display																																								
SATA disk	<b>250GB</b> or <b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																																						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																																								
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eSATA port	None																																								
Diskette drive	None																																								
Media reader	None																																								
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>																																								
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																								
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Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs																																								
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</td> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td></td> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td> <td>45K1675</td> </tr> <tr> <td></td> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td></td> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td></td> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td></td> <td>NVIDIA Quadro 256MB NVS 295</td> <td>45K1669</td> </tr> <tr> <td></td> <td>More accessories on O-M58 sheet</td> <td></td> </tr> <tr> <td></td> <td>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></td> <td></td> </tr> <tr> <td></td> <td>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></td> <td></td> </tr> </table>		- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM	45J5434		2GB PC3-8500 DDR3 UDIMM	45J5435		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675		DisplayPort to Single-link DVI-D Cable	45J7915		DisplayPort to VGA Monitor Cable	57Y4393		NVIDIA® Quadro® 256MB NVS 290	43R1765		NVIDIA Quadro 256MB NVS 295	45K1669		More accessories on O-M58 sheet			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
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<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																																								

See footnotes for important warranty information  
 US models announced November 3, 2009 or February 23, 2010  
 US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
M58	9960-ALU	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Jan 10
M58	9960-APU	4x4	Core 2 Quad Q9500	2.83	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 32	None	Mar 10
M58	9960-AMU	4x4	Core 2 Duo E7500	2.93	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	None	Pro 64	None	Mar 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q9500</b> with quad-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Tower</b>		
Implementation	Processor in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>2GB</b> or <b>4GB std.</b> , 16GB max <sup>3</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
SATA disk	<b>250GB</b> or <b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies		
SATA controller	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA DVD±RW	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar				
SATA cables	None				
eSATA port	None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		
Diskette drive	None				
Media reader	None				
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		GREENGUARD® certified RoHS-compliant		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	None				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		See footnotes for important warranty information US models announced January 12 or February 23, 2010 US models withdrawn effective March 2012		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo				
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs				
<b>Preloaded operating system<sup>20</sup></b>			<b>Accessories</b>		
- Some: Genuine Windows® 7 Professional 32			2GB PC3-8500 DDR3 UDIMM 45J5435		
- Some: Genuine Windows 7 Professional 64			500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990		
<b>Preloaded applications<sup>5</sup></b> (only some listed)			1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918		
• Rescue and Recovery™			Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675		
• ThinkVantage System Update			DisplayPort to Single-link DVI-D Cable 45J7915		
• ThinkVantage Power Manager			DisplayPort to VGA Monitor Cable 57Y4393		
• ThinkVantage Toolbox			NVIDIA® Quadro® 256MB NVS 295 45K1669		
• Norton™ Internet Security 2011 (30 days of virus definitions)			More accessories on O-M58 sheet		
• Adobe® Reader®			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe Flash® Player			Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Microsoft Office 2010 preloaded; purchase product key to activate					
• Roxio® Creator® Business Edition (DVD±RW)					
• Roxio MyDVD® (DVD±RW)					

See footnotes for important warranty information  
 US models announced January 12 or February 23, 2010  
 US models withdrawn effective March 2012

# ThinkCentre® M58 Tower (7373) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Chassis intr switch	Intel vPro	Vista preload	Global Educ	Avail date
M58	7373-AMU	4x4	Celeron E1400	2.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP			No	Bus32	No	Nov 08
M58	7373-ACU	4x4	Pentium E2200	2.20	2	1GB	160GB	DVD	GMA	VGA, DP		Switch	No	Bus32	No	Nov 08
M58	7373-AGU	4x4	Pentium E2220	2.40	2	1GB	160GB	DVD±RW	GMA	VGA, DP			No	Bus32	No	Nov 08
M58	7373-ANU	4x4	Pentium E5200	2.50	2	2GB	160GB	DVD±RW	GMA	VGA, DP			No	Bus32	No	Nov 08
M58	7373-ABU	4x4	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD	GMA	VGA, DP			No	Bus32	No	Nov 08
M58	7373-APU	4x4	Core 2 Duo E7300	2.66	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D		No	Bus32	No	Nov 08

• These models have a 3-year limited warranty<sup>1</sup>

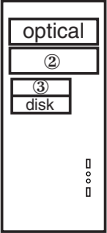
Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Celeron® Dual-Core Processor E1400</b> with <b>dual-core</b>, 800MHz system bus, and 512KB L2 cache or  <b>Intel Pentium® Dual-Core Processor E2200</b> or <b>E2220</b> with <b>dual-core</b>, 800MHz system bus, and 1MB L2 cache or  <b>Intel Pentium Dual-Core Processor E5200</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7300</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2 lb (11.0 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>		
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket												
Memory	<p><b>1GB</b> or <b>2GB std</b>, 8GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display  <i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>										<p>Slot 1: half-length, full-height, PCIe x16 (75w max)                  Slot 2: half-length, full-height, PCIe x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>		
DP dongle													
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without diskette, keyboard</li> <li>Serial port I/O control</li> <li>Individual USB port disablement</li> <li><i>Some:</i> Chassis intrusion switch</li> </ul>		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support												
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive												
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b></p>												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0												
Intel AMT	None												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs												
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® Vista® Business 32                  ↗ Vista Premium logo</p>												
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>ThinkVantage Power Manager</li> <li>McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>Lenovo System Toolbox</li> <li>Adobe® Reader</li> <li>Microsoft® Office 2007 Trial (60-day)</li> <li>Roxio® Creator® Business Edition (DVD±RW)</li> <li>Roxio MyDVD® (DVD±RW)</li> <li>Corel® WinDVD® (DVD, DVD±RW)</li> </ul>												
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>ThinkVision® L2440x Wide 24" Monitor 4421HB2</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Twin Head Cable Lock 45K1620</li> <li>ATI™ Radeon™ HD 2400 XT 256MB 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>NVIDIA Quadro® 256MB NVS 290 43R1765</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>												
<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↗ 3-year parts and labor</li> <li>↗ International Warranty Service<sup>9</sup></li> <li>↗ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↗ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↗ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↗ Post warranty maintenance services available</li> <li>↗ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>													

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective June, August, or October 2009



Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7373-D3U	4x4	Pentium E5300	2.60	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		None	XP Pro		Apr 09
M58	7373-BTU	4x4	Pentium E5300	2.60	2	2GB	160GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Feb 09
M58	7373-BUU	4x4	Core 2 Duo E7400	2.80	2	1GB	160GB	DVD	GMA	VGA, DP		None	XP Pro		Feb 09
M58	7373-BWU	4x4	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro		Feb 09
M58	7373-BVU	4x4	Core 2 Duo E7500	2.93	2	1GB	160GB	DVD	GMA	VGA, DP		None	XP Pro		Feb 09
M58	7373-D1U	4x4	Core 2 Duo E7500	2.93	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro		Feb 09
M58	7373-D2U	4x4	Core 2 Duo E7400	2.80	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	Bus32	Gbl	Feb 09

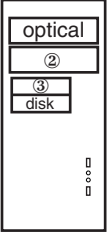
• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5300</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400</b> or <b>E7500</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		
Memory	<b>1GB</b> or <b>2GB std.</b> , 16GB max <sup>3</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory <i>(XP Pro models: up to 512MB [1GB models], 1GB [2GB models]; Vista models: up to 765MB [2GB models]),</i> one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</li> <li>Slot 2: half-length, full-height, PCIe x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		Supports ThinkVantage® technologies
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		GREENGUARD® certified RoHS-compliant
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM 45J5434		
- <i>Some:</i> Genuine Windows Vista Business 32	2GB PC3-8500 DDR3 UDIMM 45J5435		
◇ <i>Vista models:</i> Vista Premium logo	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990		
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918		
• Rescue and Recovery™	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618		
• Client Security Solution™	Super Multi-Burner DL DVD±RW SATA Drive 41N5620		
• ThinkVantage Productivity Center	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675		
• ThinkVantage System Update	DisplayPort to Single-link DVI-D Cable 45J7915		
• ThinkVantage Power Manager (Vista)	DisplayPort to VGA Monitor Cable 57Y4393		
• McAfee® VirusScan® Plus (30 days of virus definitions)	NVIDIA® Quadro® 256MB NVS 290 43R1765		
• Lenovo System Toolbox	NVIDIA Quadro 256MB NVS 295 45K1669		
• Adobe® Reader®	More accessories on O-M58 sheet		
• Microsoft® Office 2007 Trial (60-day)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Roxio® Creator® Business Edition (DVD±RW)	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			
			<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced January 20 or April 7, 2009  
 US models withdrawn effective October 2009, December 2009, April 2010, or October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7373-D6U	4x4	Pentium E5300	2.60	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Aug 09
M58	7373-D7U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Aug 09
M58	7373-D4U	4x4	Core 2 Quad Q8200	2.33	4	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro		Jul 09
M58	7373-D5U	4x4	Core 2 Quad Q8200	2.33	4	2GB	320GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	None	XP Pro		Jul 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor E5300</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache or  <b>Intel Core 2 Quad Processor Q8200</b> with <b>quad-core</b>, 1333MHz system bus, and 4MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>			
Implementation	<p><b>2GB std, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p>		<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)*                      Slot 2: half-length, full-height, PCIe x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
Memory	<p><b>2GB std, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>										<p>* used in some models</p>			
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display  <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b>, PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts</p>										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)*                      Slot 2: half-length, full-height, PCIe x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>			
DP dongle	<p><i>Some:</i> DisplayPort to Single-link DVI-D Cable</p>													
SATA disk	<p><b>160GB, 250GB, or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>													
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>													
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>													
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar</p>													
eSATA port	<p>None</p>													
Diskette drive	<p>None</p>													
Media reader	<p>None</p>													
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b></p>												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>													
Rear ports	<p>Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>													
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>													
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>													
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>													
Speaker	<p>One internal speaker for business audio</p>													
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>													
Intel AMT	<p>None</p>													
Modem	<p>None</p>													
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>												<p>Supports ThinkVantage® technologies</p>	
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>												<p>GREENGUARD® certified RoHS-compliant</p>	
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>													
Power supply	<p>280 watts with variable speed fan, manual switch, two diagnostic LEDs</p>													
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</p>													
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>• VitalSource™ Library School Edition</li> <li>• Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>													
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>ATI Radeon HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>NVIDIA Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB NVS 295 45K1669</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>												<p>➤ <b>3-year parts and labor</b></p> <p>➤ <b>International Warranty Service<sup>9</sup></b></p> <p>➤ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></p> <p>➤ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> <p>➤ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></p> <p>➤ <b>Post warranty maintenance services available</b></p> <p>➤ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></p>	

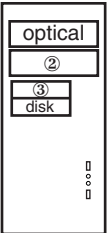
See footnotes for important warranty information  
 US models announced June 16 or July 14, 2009;  
 US models withdrawn effective October or December 2009

# ThinkCentre® M58 Tower (7373) - XP with Win 7 License - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
M58	7373-F9U	4x4	Pentium E5500	2.80	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	XP Pro		Jun 10
M58	7373-E5U	4x4	Pentium E6300	2.80	2	1GB	250GB	DVD	GMA	VGA, DP		None	XP Pro		Nov 09
M58	7373-E6U	4x4	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Nov 09
M58	7373-E7U	4x4	Pentium E6300	2.80	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	XP Pro	Educ	Nov 09
M58	7373-FBU	4x4	Core 2 Duo E7600	3.06	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Jun 10
M58	7373-E4U	4x4	Core 2 Quad Q8400	2.66	4	2GB	320GB	DVD±RW	GMA	VGA, DP		None	XP Pro		Nov 09
M58	7373-E3U	4x4	Core 2 Quad Q8400	2.66	4	2GB	320GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	None	XP Pro		Nov 09

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E5500</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Processor E6300</b> with <b>dual-core</b> , 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7600</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Quad Processor Q8400</b> with <b>quad-core</b> , 1333MHz system bus, and 4MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>1GB</b> or <b>2GB std</b> , 16GB max <sup>3</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<i>Some</i> : <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 512MB [ <i>1GB models</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)* Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3 * used in some models
DP dongle	<i>Some</i> : DisplayPort to Single-link DVI-D Cable		
SATA disk	<b>250GB</b> or <b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<h3>Security</h3> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM	45J5434	
	2GB PC3-8500 DDR3 UDIMM	45J5435	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	
	DisplayPort to Single-link DVI-D Cable	45J7915	
	DisplayPort to VGA Monitor Cable	57Y4393	
	NVIDIA® Quadro® 256MB NVS 290	43R1765	
	NVIDIA Quadro 256MB NVS 295	45K1669	
	More accessories on O-M58 sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)			
• <i>Some</i> : Education software			
- VitalSource™ Library School Edition			
- Adobe® Elements			
- Photoshop Elements 6			
- Premiere Elements 4			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• McAfee® VirusScan® Plus (30-day)			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD, DVD±RW)			
			<h3>Limited Warranty<sup>1</sup></h3> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

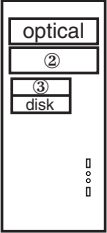
See footnotes for important warranty information  
 US models announced October 22, 2009 or June 1, 2010  
 US models withdrawn effective December 2009 or October 2010

# ThinkCentre® M58 Tower (7373) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58</b>	7373-FCU	4x4	Pentium E6700	3.20	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	Pro 32	None	Dec 10
<b>M58</b>	7373-EGU	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	Pro 32	None	Jan 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® Processor E6700 with dual-core</b> , 1066MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable		
DP dongle	None		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>		
<b>Accessories</b>	2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 295 45K1669 More accessories on O-M58 sheet  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

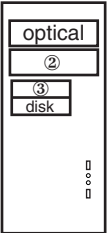
See footnotes for important warranty information  
 US models announced December 15, 2009 or November 30, 2010  
 US models withdrawn effective March 2012

# ThinkCentre® M58 Tower (6239) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
<b>M58</b>	6239-ACU	4x4	Celeron E1400	2.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		None	No	Bus32	No	Nov 08
<b>M58</b>	6239-ADU	4x4	Pentium E2200	2.20	2	1GB	160GB	DVD±RW	GMA	VGA, DP		None	No	Bus32	No	Nov 08
<b>M58</b>	6239-AEU	4x4	Pentium E5200	2.50	2	1GB	160GB	DVD±RW	GMA	VGA, DP		None	No	Bus32	No	Nov 08
<b>M58</b>	6239-AFU	4x4	Core 2 Duo E7300	2.66	2	1GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	None	No	Bus32	No	Nov 08

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Celeron® Dual-Core Processor E1400</b> with <b>dual-core</b>, 800MHz system bus, and 512KB L2 cache or  <b>Intel Pentium® Dual-Core Processor E2200</b> with <b>dual-core</b>, 800MHz system bus, and 1MB L2 cache or  <b>Intel Pentium Dual-Core Processor E5200</b> with <b>dual-core</b>, 800MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7300</b> with <b>dual-core</b>, 1066MHz system bus, and 3MB L2 cache                      Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																																				
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket										<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>																																																				
Memory	<p><b>1GB std</b>, 8GB max<sup>a</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																																																				
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 253MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display  <i>Some</i>: DisplayPort to Single-link DVI-D Cable</p>																																																														
DP dongle	<p><i>Some</i>: DisplayPort to Single-link DVI-D Cable</p>																																																														
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>																																																														
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1</p>																																																														
SATA DVD	<p><i>Some</i>: DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>																																																														
SATA DVD±RW	<p><i>Some</i>: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																																																														
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar</p>																																																														
eSATA port	None																																																														
Diskette drive	None																																																														
Media reader	None																																																														
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>																																																														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																														
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																																																														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																																																														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																																														
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																																																														
Speaker	One internal speaker for business audio																																																														
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																																																														
Intel AMT	None																																																														
Modem	None																																																														
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																																																														
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																																																														
Power supply	280 watts with variable speed fan, autosenesing, two diagnostic LEDs, 80% PSU																																																														
<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® Vista® Business 32</li> <li>◇ Vista Premium logo</li> </ul> <p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>												<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td> <td>41N5618</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td> <td>45K1675</td> </tr> <tr> <td>ThinkVision® L2440x Wide 24" Monitor</td> <td>4421HB2</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>Ultraslim Wireless Keyboard and Mouse</td> <td>57Y4700</td> </tr> <tr> <td>Lenovo USB Fingerprint Keyboard</td> <td>73P4730</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington Twin Head Cable Lock</td> <td>45K1620</td> </tr> <tr> <td>ATI™ Radeon™ HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> <tr> <td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td> <td>45K1635</td> </tr> <tr> <td>NVIDIA Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ThinkVision® L2440x Wide 24" Monitor	4421HB2	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	Ultraslim Wireless Keyboard and Mouse	57Y4700	Lenovo USB Fingerprint Keyboard	73P4730	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Twin Head Cable Lock	45K1620	ATI™ Radeon™ HD 2400 XT 256MB	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635	NVIDIA Quadro® 256MB NVS 290	43R1765				
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Supports ThinkVantage® technologies																																																															
GREENGUARD® certified																																																															
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<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																															

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective June, August, or October 2009

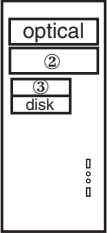


# ThinkCentre® M58 Tower (9728) - ES 5.0 (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
M58	9728-A6U	4x4	Pentium E6300	2.80	2	2GB	250GB <sup>b</sup>	DVD±RW	GMA	VGA, DP		ES50	No	XP Pro	No	Oct 09
M58	9728-A7U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	No	Oct 09
M58	9728-A8U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	No	XP Pro	No	Oct 09

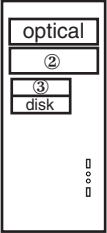
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Pentium® Processor E6300</b> with <b>dual-core</b>, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b>, Virtualization Technology, 1066MHz system bus, and 3MB L2 cache                      Processor in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>			
Implementation	Processor in LGA775 socket													
Memory	<p><b>2GB std</b>, 16GB max<sup>b</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; 3 sockets available</p>													
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display  <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b>, PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p>			
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)*                      Slot 2: half-length, full-height, PCIe x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>			
SATA disk	<p><b>250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>													
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0													
Intel AMT	None													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												<p>Supports ThinkVantage® technologies</p>	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo													
Power supply	280 watts with variable speed fan, autosensing, 85% PSU													
<b>Preloaded operating system<sup>20</sup></b>	<p>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</p>													
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>										<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB NVS 295 45K1669</li> <li>More accessories on O-M58 sheet</li> </ul> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			
													<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced October 22, 2009  
 US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
M58	9728-A5U	4x4	Core 2 Duo E7500	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	No	Pro 32	Gbl	Oct 09

- *This model has a 3-year limited warranty<sup>1</sup>*
- *This system is Microsoft® Office 2010 Product Key Ready (O10PKR)*

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E7500</b> with <b>dual-core</b> , Virtualization Technology, 1066MHz system bus, and 3MB L2 cache										<b>Tower</b>		
Implementation	Processor in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0												
Intel AMT	None												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										Supports ThinkVantage® technologies		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, 85% PSU												
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>												
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM										45J5435		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	500GB SATA 3.0Gb/s Disk (7200 rpm)										43R1990		
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)										45J7918		
• ThinkVantage System Update	Blu-ray™ Burner SATA 1.5Gb/s Drive										45K1675		
• ThinkVantage Power Manager	DisplayPort to Single-link DVI-D Cable										45J7915		
• ThinkVantage Toolbox	DisplayPort to VGA Monitor Cable										57Y4393		
• Norton™ Internet Security 2011 (30 days of virus definitions)	NVIDIA® Quadro® 256MB NVS 295										45K1669		
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>												
• Adobe Flash® Player	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												
• Microsoft Office 2010 preloaded; purchase product key to activate													
• Roxio® Creator® Business Edition (DVD±RW)													
• Roxio MyDVD® (DVD±RW)													
												<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
 US model announced October 22, 2009  
 US model withdrawn effective March 2012

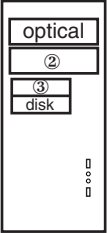


# ThinkCentre® M58 Tower (7639) - GMP (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
M58	7639-A1U	4x4	Core 2 Duo E7500	2.93 2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	Pro 32	G P	Nov 09

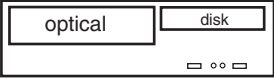
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	None		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• ThinkVantage System Update	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	
• ThinkVantage Power Manager	DisplayPort to Single-link DVI-D Cable	45J7915	
• ThinkVantage Toolbox	DisplayPort to VGA Monitor Cable	57Y4393	
• Norton™ Internet Security 2011 (30 days of virus definitions)	NVIDIA® Quadro® 256MB NVS 295	45K1669	
• Adobe® Reader®	More accessories on O-M58 sheet		
• Adobe Flash® Player	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Microsoft Office 2010 preloaded; purchase product key to activate	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
	Supports ThinkVantage® technologies		
	GREENGUARD® certified RoHS-compliant		
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
 US model announced November 3, 2009  
 US model withdrawn effective March 2012

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro Preload	Global Educ	Avail date
<b>M58p</b>	9961-A1U	1x2	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>b</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro XP Pro	No	Dec 08

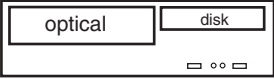
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Eco Ultra Small</b> 			
Implementation	Processor in FC-LGA8 package in LGA775 socket													
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3			
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>			
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar													
eSATA port	None										EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
Diskette drive	None													
Media reader	None													
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0													
Intel AMT	Intel Active Management Technology (iAMT)													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU													
<b>Preloaded operating system<sup>20</sup></b>					<b>Accessories</b>					<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>				
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)					1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987 2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 ThinkCentre Ultra Small Under Desk Mount 40Y8625 More accessories on O-M58 sheet									
<b>Preloaded applications<sup>5</sup></b>					Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>									
<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>					Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>									

See footnotes for important warranty information  
 US model announced November 11, 2008  
 US model withdrawn effective November 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 4.0	Intel vPro Preload	Global Educ	Avail date
<b>M58p</b>	9961-A3U	1x2	Core 2 Duo E8500	3.16	2	2GB	250GB <sup>b</sup>	DVD±RW	GMA	VGA, DP	None	ES40	vPro XP Pro	No	Apr 09

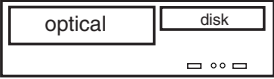
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate stability/manageability for small and medium businesses <b>Intel® Core™ 2 Duo Processor E8500</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Eco Ultra Small</b> 
Implementation	Processor in FC-LGA8 package in LGA775 socket										
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1										
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar										
eSATA port	None										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0										
Intel AMT	Intel Active Management Technology (iAMT)										
Modem	None										
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU										
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Microsoft® Windows® XP Professional with Vista® COA</li> <li>◇ Disk-to-Disk Recovery (in hidden protected area)</li> <li>◇ Vista Premium logo</li> </ul>										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage Power Manager</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> <li>• Corel WinDVD Creator (DVD±RW)</li> </ul>										
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 SODIMM (notebook) 43R1987</li> <li>2GB PC3-8500 DDR3 SODIMM (notebook) 43R1988</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L2440x Wide 24" Monitor 4421HB2</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Lenovo USB Fingerprint Keyboard 73P4730</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>Kensington Twin Head Cable Lock 45K1620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>										

See footnotes for important warranty information  
 US model announced April 7, 2009  
 US model withdrawn effective April 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro Preload	Global Educ	Avail date
<b>M58p</b>	9961-AKU	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro XP Pro	No	Nov 09

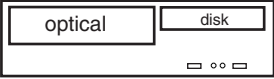
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			

See footnotes for important warranty information  
 US model announced November 3, 2009  
 US model withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	9961-ALU	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Pro 32	No	Jan 10

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty<sup>1</sup>
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk  Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system</b> <sup>20</sup>	- Genuine Windows® 7 Professional 32		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
<b>Preloaded applications</b> <sup>5</sup> (only some listed)	<b>Accessories</b> <ul style="list-style-type: none"> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			
• Rescue and Recovery™				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

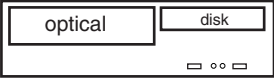
See footnotes for important warranty information  
 US model announced January 12, 2010  
 US model withdrawn effective March 2012

# ThinkCentre® M58p Eco Ultra Small (7479) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
<b>M58p</b>	7479-A4U	1x2	Core 2 Duo E8400	3.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-A3U	1x2	Core 2 Duo E8400	3.00	2	1GB	250GB	DVD±RW	GMA	VGA, DP		ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-A6U	1x2	Core 2 Duo E8400	3.00	2	2GB	160GB	DVD±RW	GMA	VGA, DP		ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-A8U	1x2	Core 2 Duo E8400	3.00	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-A9U	1x2	Core 2 Duo E8500	3.16	2	1GB	160GB	DVD	GMA	VGA, DP		ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-ABU	1x2	Core 2 Duo E8500	3.16	2	2GB	160GB	DVD±RW	GMA	VGA, DP		ES50	vPro	Bus32	No	Dec 08
<b>M58p</b>	7479-ACU	1x2	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	Bus32	No	Dec 08

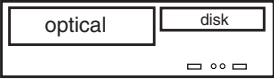
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>1GB or 2GB std, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable			
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		Supports ThinkVantage® technologies	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® Vista® Business 32	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
◇ Vista Premium logo	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
<b>Preloaded applications<sup>5</sup></b>	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618			
• Rescue and Recovery™	Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
• Client Security Solution™	DisplayPort to Single-link DVI-D Cable 45J7915			
• ThinkVantage Productivity Center	DisplayPort to VGA Monitor Cable 57Y4393			
• ThinkVantage System Update	Lenovo Vertical PC and Monitor Stand II 41R4474			
• ThinkVantage Power Manager	ThinkCentre Ultra Small Under Desk Mount 40Y8625			
• McAfee® VirusScan® Plus (30 days of virus definitions)	More accessories on O-M58 sheet			
• Lenovo System Toolbox	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD, DVD±RW)				
			<ul style="list-style-type: none"> <li>⇨ <b>3-year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇨ <b>Post warranty maintenance services available</b></li> <li>⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced November 11, 2008  
 US models withdrawn effective December 2009 or December 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload Educ	Avail date	
<b>M58p</b>	7479-AJU	1x2	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Apr 09
<b>M58p</b>	7479-AKU	1x2	Core 2 Duo E8500	3.16	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Apr 09

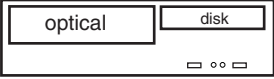
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical	Bay ② 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, 32-bit PCI 2.3	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle	DisplayPort to Single-link DVI-D Cable			
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>ThinkCentre Ultra Small Under Desk Mount 40Y8625</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>More accessories on O-M58 sheet</li> </ul>	<ul style="list-style-type: none"> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
				<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
US models announced April 7, 2009  
US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	7479-F6U	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	Educ	Aug 09
<b>M58p</b>	7479-F5U	1x2	Core 2 Quad Q9400	2.66	4	4GB	500GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	Educ	Aug 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or</p> <p><b>Intel Core 2 Quad Processor Q9400</b> with <b>quad-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache</p>										<p><b>Eco Ultra Small</b></p> 																			
Implementation	Processor in FC-LGA8 package in LGA775 socket										<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, 32-bit PCI 2.3</p>																			
Memory	<p><b>2GB or 4GB std</b>, 4GB max<sup>8</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook);</p> <p><i>Italics:</i> standard memory in both sockets; no sockets available;</p> <p><i>Non-italics:</i> standard memory in one socket; one socket available</p>										<p>• Business black color; metal case</p> <p>• 10.8" W X 9.4" D X 3.1" H</p> <p>• 275mm W X 238mm D X 80mm H</p> <p>• 9.2 lb (4.2 kg) in maximum configuration</p> <p>• Hinged toolless cover for easy serviceability</p> <p>• Toolless disk and optical drive removal</p> <p>• Toolless systemboard retention</p> <p>• System floor stand for vertical orientation</p>																			
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)                             <ul style="list-style-type: none"> <li>- security slot and cover release button are combined into one latch for improved chassis security</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>																			
DP dongle	DisplayPort to Single-link DVI-D Cable										<p>Supports ThinkVantage® technologies</p>																			
SATA disk	<p><b>250GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>										<p><b>Keyboard</b> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support										<p><b>Mouse</b> Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										<p><b>Power supply</b> External AC/DC adapter, 130 watts, autosensing, 87% PSU</p>																			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar										<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</li> </ul>																			
eSATA port	None										<p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																			
Diskette drive	None										<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-8500 DDR3 SODIMM (notebook)</td> <td>43R1987</td> </tr> <tr> <td>2GB PC3-8500 DDR3 SODIMM (notebook)</td> <td>43R1988</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>Lenovo Vertical PC and Monitor Stand II</td> <td>41R4474</td> </tr> <tr> <td>ThinkCentre Ultra Small Under Desk Mount</td> <td>40Y8625</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> </table> <p>More accessories on O-M58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC3-8500 DDR3 SODIMM (notebook)	43R1987	2GB PC3-8500 DDR3 SODIMM (notebook)	43R1988	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Lenovo Vertical PC and Monitor Stand II	41R4474	ThinkCentre Ultra Small Under Desk Mount	40Y8625	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393
1GB PC3-8500 DDR3 SODIMM (notebook)	43R1987																													
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DisplayPort to Single-link DVI-D Cable	45J7915																													
DisplayPort to VGA Monitor Cable	57Y4393																													
Media reader	None										<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																			
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>										<p><b>Front ports</b> Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p><b>Rear ports</b> Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p> <p><b>Internal connector</b> Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p> <p><b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p> <p><b>Audio</b> High Definition (HD) Audio, Analog Devices AD1882 codec</p> <p><b>Speaker</b> One internal speaker for business audio</p> <p><b>Ethernet</b> Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p> <p><b>Intel AMT</b> Intel Active Management Technology (iAMT)</p> <p><b>Modem</b> None</p> <p><b>Security chip</b> Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>																			

See footnotes for important warranty information  
 US models announced July 14, 2009  
 US models withdrawn effective December 2009



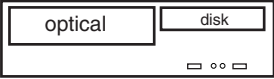
# ThinkCentre® M58p Eco Ultra Small (7479) - ES 5.0 (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	SATA Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	7479-B9U	1x2	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	Pro 32	None	Jan 10
<b>M58p</b>	7479-BEU	1x2	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		ES50	vPro	Pro 32	None	Oct 10

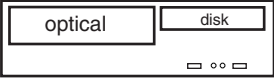
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with dual-core, dual-channel capable, two 204-pin SODIMM sockets (notebook); and 6MB L2 cache	<b>Eco Ultra Small</b>	
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some</i> : DisplayPort to Single-link DVI-D Cable	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 80mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some</i> : DisplayPort to Single-link DVI-D Cable		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
			<b>Security</b>
			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> </ul>
			Supports ThinkVantage® technologies
<b>Preloaded operating system</b> <sup>20</sup>	- Genuine Windows® 7 Professional 32		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
<b>Preloaded applications</b> <sup>5</sup>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>	<b>Accessories</b> 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Lenovo Vertical PC and Monitor Stand II 41R4474 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<b>Limited Warranty</b> <sup>1</sup>
			<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service</b><sup>9</sup></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced December 15, 2009 or September 14, 2010  
 US models withdrawn effective March 2012

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
M58p	6136-A1U	1x2	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Bus32	G P	Dec 08

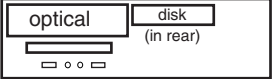
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Eco Ultra Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk  Slot 1: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - security slot and cover release button are combined into one latch for improved chassis security</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ↕ Vista Premium logo		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			
	<b>Accessories</b> 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 More accessories on O-M58 sheet  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		<b>Limited Warranty<sup>1</sup></b> ↕ 3-year parts and labor ↕ International Warranty Service® ↕ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ↕ Onsite service upgrade options (in eligible locations): <sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> ↕ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ↕ Post warranty maintenance services available ↕ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378	

See footnotes for important warranty information  
 US model announced November 11, 2008  
 US model withdrawn effective August 2011

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	9964-A1U	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 08
<b>M58p</b>	9964-A2U	2x3	Core 2 Quad Q9400	2.66	4	2GB	250GB	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 08

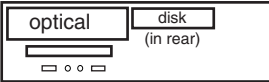
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400</b> with quad-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in FC-LGA8 package in LGA775 socket		<b>Small</b>																							
Implementation	Processor in FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)																							
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3																							
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>																							
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening			<b>Security</b>																						
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																									
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>																						
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																									
eSATA port	One external SATA (eSATA) port																									
Diskette drive	None																									
Media reader	None																									
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>																									
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																									
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA																									
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																									
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																									
Speaker	One internal speaker for business audio																									
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																									
Intel AMT	Intel Active Management Technology (iAMT)																									
Modem	None																									
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			Supports ThinkVantage® technologies																						
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																									
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs																									
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			GREENGUARD® certified RoHS-compliant																						
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>		<b>Accessories</b> <table border="0"> <tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr> <tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr> <tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr> <tr><td>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 3470 256MB (DP, VGA)</td><td>45K1636</td></tr> <tr><td>NVIDIA® Quadro® 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB FX 370 LP</td><td>55Y9275</td></tr> </table> <p>More accessories on O-M58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB FX 370 LP	55Y9275	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
1GB PC3-8500 DDR3 UDIMM	45J5434																									
2GB PC3-8500 DDR3 UDIMM	45J5435																									
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																									
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																									
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																									
DisplayPort to Single-link DVI-D Cable	45J7915																									
DisplayPort to VGA Monitor Cable	57Y4393																									
ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962																									
ATI Radeon HD 3470 256MB (DP, VGA)	45K1636																									
NVIDIA® Quadro® 256MB NVS 290	43R1765																									
NVIDIA Quadro 256MB FX 370 LP	55Y9275																									

See footnotes for important warranty information  
US models announced October 21, 2008  
US models withdrawn effective April or November 2009

# ThinkCentre® M58p Small (9964) - TopSeller (June 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	9964-A5U	2x3	Core 2 Quad Q9400	2.66	4	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Jul 09
<ul style="list-style-type: none"> <li>• <b>Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)</b></li> <li>• <b>This small and medium business (SMB) model is part of the US TopSeller™ Program</b></li> <li>• <b>This model has a 3-year limited warranty<sup>1</sup></b></li> </ul>															
Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Small</b> 				
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)				
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3				
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>				
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1														
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors														
eSATA port	One external SATA (eSATA) port														
Diskette drive	None										<b>Supports ThinkVantage® technologies</b>				
Media reader	None														
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)														
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec														
Speaker	One internal speaker for business audio														
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0														
Intel AMT	Intel Active Management Technology (iAMT)														
Modem	None														
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs														
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>													
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		1GB PC3-8500 DDR3 UDIMM		45J5434											
		2GB PC3-8500 DDR3 UDIMM		45J5435											
		500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990											
		1TB SATA 3.0Gb/s Disk (7200 rpm)		45J7918											
		Super Multi-Burner DL DVD±RW SATA Drive		41N5620											
		DisplayPort to Single-link DVI-D Cable		45J7915											
		DisplayPort to VGA Monitor Cable		57Y4393											
		ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)		43R1962											
		ATI Radeon HD 3470 256MB (DP, VGA)		45K1636											
		NVIDIA® Quadro® 256MB NVS 290		43R1765											
		NVIDIA Quadro 256MB FX 370 LP		55Y9275											
		More accessories on O-M58 sheet													
		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>													
		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
<b>Preloaded applications<sup>5</sup></b>															
• Rescue and Recovery™															
• Client Security Solution™															
• ThinkVantage Productivity Center															
• ThinkVantage System Update															
• McAfee® VirusScan® Plus (30 days of virus definitions)															
• Lenovo System Toolbox															
• Adobe® Reader®															
• Microsoft® Office 2007 Trial (60-day)															
• Roxio® Creator® Business Edition (DVD±RW)															
• Roxio MyDVD® (DVD±RW)															
• Corel® WinDVD® (DVD±RW)															
		<b>GREENGUARD® certified</b> <b>RoHS-compliant</b>													
		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>													

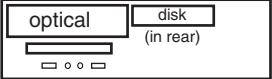
See footnotes for important warranty information  
 US model announced June 16, 2009  
 US model withdrawn effective November 2009

# ThinkCentre® M58p Small (9964) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	9964-A7U	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 09
<b>M58p</b>	9964-A8U	2x3	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in LGA775 socket	
Memory	<b>2GB or 4GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	Supports ThinkVantage® technologies
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	One external SATA (eSATA) port	GREENGUARD® certified RoHS-compliant
Diskette drive	None	
Media reader	None	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA	GREENGUARD® certified RoHS-compliant
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	Supports ThinkVantage® technologies
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	GREENGUARD® certified RoHS-compliant
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	Intel Active Management Technology (iAMT)	Supports ThinkVantage® technologies
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	GREENGUARD® certified RoHS-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	Supports ThinkVantage® technologies
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	Supports ThinkVantage® technologies
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	Supports ThinkVantage® technologies

See footnotes for important warranty information  
US models announced November 3, 2009  
US models withdrawn effective April or October 2010

# ThinkCentre® M58p Small (9964) - TopS (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	9964-ABU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
<b>M58p</b>	9964-ACU	2x3	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
<b>M58p</b>	9964-ADU	2x3	Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10

• **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**  
 • **These small and medium business (SMB) models are part of the US TopSeller™ Program**  
 • **These models have a 3-year limited warranty<sup>1</sup>**  
 • **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>	
Implementation	Processor in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB or 4GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display	• Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without diskette, keyboard</li> <li>Serial port I/O control</li> <li>Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	One external SATA (eSATA) port		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	GREENGUARD® certified	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	RoHS-compliant	
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435	
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DisplayPort to Single-link DVI-D Cable	45J7915	
	DisplayPort to VGA Monitor Cable	57Y4393	
	More accessories on O-M58 sheet		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Rescue and Recovery™	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
			⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

See footnotes for important warranty information  
 US models announced January 12 or February 23, 2010  
 US models withdrawn effective April 2010 or March 2012

# ThinkCentre® M58p Small (7483) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Chassis intr switch	Intel vPro	Vista preload	Global Educ	Avail date
<b>M58p</b>	7483-AEU	2x3	Core 2 Duo E8400	3.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP			vPro	Bus32		Nov 08
<b>M58p</b>	7483-AFU	2x3	Core 2 Duo E8400	3.00	2	1GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08
<b>M58p</b>	7483-A7U	2x3	Core 2 Duo E8400	3.00	2	1GB	250GB	DVD±RW	GMA	VGA, DP		Switch	vPro	Bus32		Nov 08
<b>M58p</b>	7483-ACU	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB	DVD±RW	GMA	VGA, DP			vPro	Bus32		Nov 08
<b>M58p</b>	7483-AGU	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB	DVD±RW	GMA	VGA, DP			vPro	Bus32	Educ	Nov 08
<b>M58p</b>	7483-AHU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08
<b>M58p</b>	7483-AJU	2x3	Core 2 Duo E8500	3.16	2	1GB	250GB	DVD	GMA	VGA, DP			vPro	Bus32		Nov 08
<b>M58p</b>	7483-AKU	2x3	Core 2 Duo E8500	3.16	2	2GB	160GB	DVD	<b>3470</b>	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08
<b>M58p</b>	7483-ALU	2x3	Core 2 Duo E8500	3.16	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08
<b>M58p</b>	7483-AMU	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08
<b>M58p</b>	7483-ANU	2x3	Core 2 Quad Q9400	2.66	4	2GB	160GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D		vPro	Bus32		Nov 08

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning	<i>Mainstream enterprise stability and manageability</i>		<b>Small</b>	
Processor	<b>Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache			
Implementation	Processor in FC-LGA8 package in LGA775 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Slot 1: Low Profile, PCI Express 2.0 x16* Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts		* used in some models <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>	
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support		Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b> <ul style="list-style-type: none"> <li>- Genuine Windows® Vista® Business 32</li> <li>↪ Vista Premium logo</li> </ul>			<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>More accessories on O-M58 sheet</li> </ul>	
<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements               <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective December 2009, April 2010, or December 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	7483-B1U	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	None	Apr 09
<b>M58p</b>	7483-B2U	2x3	Core 2 Duo E8500	3.16	2	2GB	160GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	None	Apr 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

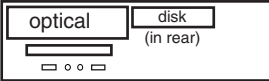
Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
DP dongle	DisplayPort to Single-link DVI-D Cable		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		Supports ThinkVantage® technologies	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>		GREENGUARD® certified RoHS-compliant	
<b>Accessories</b>	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 290 43R1765 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
 US models announced April 7, 2009  
 US models withdrawn effective October 2010



Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	7483-F3U	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	Educ	Aug 09
<b>M58p</b>	7483-B3U	2x3	Core 2 Quad Q9400	2.66	4	2GB	160GB	DVD±RW	GMA	VGA, DP		vPro	XP Pro		Jul 09
<b>M58p</b>	7483-F4U	2x3	Core 2 Quad Q9400	2.66	4	4GB	500GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	Educ	Aug 09

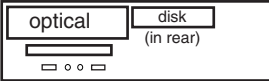
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400</b> with <b>quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB</b> or <b>4GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, no access, std disk</p> <p>Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16</p> <p>Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable			
DP dongle	None			
SATA disk	<b>160GB, 250GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)		<p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB FX 370 LP 55Y9275</li> </ul> <p>More accessories on O-M58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			
<b>Limited Warranty<sup>1</sup></b>	<ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>			

See footnotes for important warranty information  
 US models announced June 16 or July 14, 2009  
 US models withdrawn effective December 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	7483-BWU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		vPro	Pro 32	None	Oct 10
<b>M58p</b>	7483-BRU	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	Pro 32	None	Jan 10
<b>M58p</b>	7483-BVU	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		vPro	Pro 64	None	Oct 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std, 16GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
DP dongle			<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		Supports ThinkVantage® technologies	
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435		GREENGUARD® certified RoHS-compliant	
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
	DisplayPort to Single-link DVI-D Cable 45J7915			
	DisplayPort to VGA Monitor Cable 57Y4393			
	More accessories on O-M58 sheet			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
<b>Preloaded applications<sup>5</sup></b> (all OSEs; only some listed)				
• Rescue and Recovery™				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

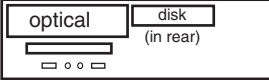
See footnotes for important warranty information  
 US models announced December 15, 2009 or September 14, 2010  
 US models withdrawn effective March 2012

# ThinkCentre® M58p Small (7220) - ENERGY STAR® 5.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
<b>M58p</b>	7220-A6U	2x3	Core 2 Duo E8400	3.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		ES50	vPro	Bus32	No	Nov 08
<b>M58p</b>	7220-A7U	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	vPro	Bus32	No	Nov 08
<b>M58p</b>	7220-A8U	2x3	Core 2 Duo E8500	3.16	2	1GB	250GB	DVD	GMA	VGA, DP		ES50	vPro	Bus32	No	Nov 08
<b>M58p</b>	7220-A9U	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	vPro	Bus32	No	Nov 08
<b>M58p</b>	7220-ABU	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	Bus32	No	Nov 08

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning	<b>Mainstream enterprise stability and manageability</b>										<b>Small</b>	
Processor	<b>Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache											
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>1GB or 2GB std</b> , 16GB max <sup>6</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available										Slot 1: Low Profile, PCI Express 2.0 x16* Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	Some: <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display Some: <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts										* used in some models • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation	
DP dongle	Some: DisplayPort to Single-link DVI-D Cable											
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1											
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive											
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar											
eSATA port	One external SATA (eSATA) port											
Diskette drive	None											
Media reader	None											
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	Intel Active Management Technology (IAMT)											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										Supports ThinkVantage® technologies  Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>											
- Genuine Windows® Vista® Business 32	1GB PC3-8500 DDR3 UDIMM										45J5434	
↕ Vista Premium logo	2GB PC3-8500 DDR3 UDIMM										45J5435	
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm)										43R1990	
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)										45J7918	
• Client Security Solution™	DVD-ROM DL SATA 1.5Gb/s 16-48X Max										41N5618	
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW SATA Drive										41N5620	
• ThinkVantage System Update	DisplayPort to Single-link DVI-D Cable										45J7915	
• ThinkVantage Power Manager	DisplayPort to VGA Monitor Cable										57Y4393	
• McAfee® VirusScan® Plus (30 days of virus definitions)	NVIDIA® Quadro® 256MB NVS 290										43R1765	
• Lenovo System Toolbox	More accessories on O-M58 sheet											
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>											
• Microsoft Office 2010 preloaded; purchase product key to activate	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											
• Roxio® Creator® Business Edition (DVD±RW)												
• Roxio MyDVD® (DVD±RW)												
• Corel® WinDVD® (DVD, DVD±RW)												
											<b>Limited Warranty<sup>1</sup></b> ↕ <b>3-year parts and labor</b> ↕ <b>International Warranty Service<sup>9</sup></b> ↕ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↕ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ↕ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ↕ <b>Post warranty maintenance services available</b> ↕ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective December 2009 or December 2010

# ThinkCentre® M58p Small (7220) - ES 5.0 (April 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro Preload Educ	Global	Avail date
<b>M58p</b>	7220-AGU	2x3	Core 2 Duo E8400	3.00 2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro XP Pro	No	Apr 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **This model has a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>																										
Implementation	Processor in FC-LGA8 package in LGA775 socket																												
Memory	<b>2GB std, 16GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)																										
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3																										
DP dongle	DisplayPort to Single-link DVI-D Cable		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies																										
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																												
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors																												
eSATA port	One external SATA (eSATA) port																												
Diskette drive	None																												
Media reader	None																												
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																												
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA																												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec																												
Speaker	One internal speaker for business audio																												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																												
Intel AMT	Intel Active Management Technology (iAMT)																												
Modem	None																												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																												
Power supply	280 watts with variable speed fan, autosensing, 85% PSU																												
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</td> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td></td> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td></td> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td></td> <td>NVIDIA® Quadro® 256MB NVS 290</td> <td>43R1765</td> </tr> <tr> <td></td> <td colspan="2">More accessories on O-M58 sheet</td> </tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM	45J5434		2GB PC3-8500 DDR3 UDIMM	45J5435		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		DisplayPort to Single-link DVI-D Cable	45J7915		DisplayPort to VGA Monitor Cable	57Y4393		NVIDIA® Quadro® 256MB NVS 290	43R1765		More accessories on O-M58 sheet	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM	45J5434																											
	2GB PC3-8500 DDR3 UDIMM	45J5435																											
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	DisplayPort to VGA Monitor Cable	57Y4393																											
	NVIDIA® Quadro® 256MB NVS 290	43R1765																											
	More accessories on O-M58 sheet																												
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																												
Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant																													
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																													

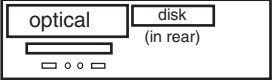
See footnotes for important warranty information  
 US model announced April 7, 2009  
 US model withdrawn effective October 2010

# ThinkCentre® M58p Small (7220) - ES 5.0 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory	SATA disk	SATA optical	Graphics	Monitor conn	Chassis intr switch	DisplayPort dongle	Intel vPro	Floor stand	Win7 preload	Global Educ	Avail date
7220-B3U	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	vPro	Stand	Pro 32		Oct 10
7220-AVU	2x3	Core 2 Duo E8400	3.00	2	2GB	320GB	DVD±RW	GMA	VGA, DP	Switch	None	vPro		Pro 32	Gbl	Oct 10
7220-B4U	2x3	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		None	vPro	Stand	Pro 64		Oct 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> Supports ThinkVantage® technologies	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosenensing, 85% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
- <i>Some:</i> Genuine Windows® 7 Professional 32				
- <i>Some:</i> Genuine Windows 7 Professional 64				
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)				
• Rescue and Recovery™				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
	<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>			

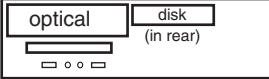
See footnotes for important warranty information  
 US models announced September 14 or 28, 2010  
 US models withdrawn effective March 2012

# ThinkCentre® M58p Small (6137) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Chassis intr switch	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58p</b>	6137-A2U	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP	None		vPro	Bus32	G P	Jan 09
<b>M58p</b>	6137-A1U	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB	DVD±RW	GMA	VGA, DP	None	Switch	vPro	Bus32	G P	Nov 08
<b>M58p</b>	6137-A3U	2x3	Core 2 Duo E8400	3.00	2	3GB	160GB	DVD	GMA	VGA, DP	None	Switch	vPro	Bus32	G P	Mar 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models are part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket			
Memory	<b>2GB</b> or <b>3GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)  Slot 1: Low Profile, PCI Express 2.0 x16 Slot 2: Low Profile, 32-bit PCI 2.3  <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB [2GB models], 1277MB [3GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA Drive			
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors			
eSATA port	One external SATA (eSATA) port			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® Vista® Business 32	1GB PC3-8500 DDR3 UDIMM	45J5434		
↕ Vista Premium logo	2GB PC3-8500 DDR3 UDIMM	45J5435		
<b>Preloaded applications<sup>5</sup></b>	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
• Client Security Solution™	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618		
• ThinkVantage Productivity Center	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
• ThinkVantage System Update	DisplayPort to Single-link DVI-D Cable	45J7915		
• ThinkVantage Power Manager	DisplayPort to VGA Monitor Cable	57Y4393		
• McAfee® VirusScan® Plus (30 days of virus definitions)	More accessories on O-M58 sheet			
• Lenovo System Toolbox	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD, DVD±RW)				
	Supports ThinkVantage® technologies			
	GREENGUARD® certified RoHS-compliant			
	<b>Limited Warranty<sup>1</sup></b>			
	↪ <b>3-year parts and labor</b>			
	↪ <b>International Warranty Service<sup>9</sup></b>			
	↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>			
	↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>			
	• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)			
	• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)			
	• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)			
	↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>			
	↪ <b>Post warranty maintenance services available</b>			
	↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>			

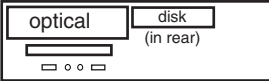
See footnotes for important warranty information  
 US models announced October 21, 2008, December 9, 2008, or February 17, 2009  
 US models withdrawn effective August 2011

# ThinkCentre® M58p Small (6234) - ES 5.0 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58p</b>	6234-A1U	2x3	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Bus32	G P	Nov 08

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>2</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Small</b>			
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical		Bay ② 3.5", 1" high, no access, std disk	
Memory	<b>2GB std, 16GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available										Bay ③ 3.5", .5" high, access, open (reader)		Slot 1: Low Profile, PCI Express 2.0 x16	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Slot 2: Low Profile, 32-bit PCI 2.3		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>		<p>Supports ThinkVantage® technologies</p> <p>Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1													
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors													
eSATA port	One external SATA (eSATA) port													
Diskette drive	None										Keyboard		Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Media reader	None										Mouse		Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										Power supply		280 watts with variable speed fan, autosensing, 85% PSU	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® Vista® Business 32</li> <li>↪ Vista Premium logo</li> </ul> <p><b>Preloaded applications<sup>5</sup></b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>More accessories on O-M58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort), eSATA													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0													
Intel AMT	Intel Active Management Technology (iAMT)													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant													

See footnotes for important warranty information  
US model announced October 21, 2008  
US model withdrawn effective August 2011

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	9965-A1U	4x4	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 08
<b>M58p</b>	9965-A2U	4x4	Core 2 Quad Q9400	2.66	4	2GB	250GB	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 08

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>	
Implementation	Processor in FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display			
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>		<b>Security</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0			
Intel AMT	Intel Active Management Technology (iAMT)			
Modem	None			
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs		GREENGUARD® certified RoHS-compliant	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM	45J5434	↪ <b>3-year parts and labor</b>	
	2GB PC3-8500 DDR3 UDIMM	45J5435	↪ <b>International Warranty Service<sup>9</sup></b>	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)	
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)	
	DisplayPort to Single-link DVI-D Cable	45J7915	• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)	
	DisplayPort to VGA Monitor Cable	57Y4393	• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)	
	ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962	• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)	
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636		
	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635		
	NVIDIA Quadro® 256MB NVS 290	43R1765		
	NVIDIA Quadro 256MB NVS 295	45K1669		
	More accessories on O-M58 sheet			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective November 2009

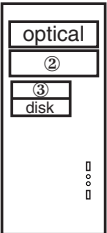


# ThinkCentre® M58p Tower (9965) - TopS (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	9965-A9U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
<b>M58p</b>	9965-ABU	4x4	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 32	None	Jan 10
<b>M58p</b>	9965-ACU	4x4	Core 2 Duo E8400	3.00	2	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	Pro 64	None	Mar 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><b>Mainstream enterprise stability and manageability</b>  <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or  <b>Intel Core 2 Quad Processor Q9400 with quad-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation	Processor in LGA775 socket			
Memory	<p><b>2GB or 4GB std.</b>, 16GB max<sup>3</sup>, <b>PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>		<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                  Slot 2: half-length, full-height, PCIe x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
Graphics	<p><b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display</p>			
SATA disk	<p><b>250GB or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>			
SATA cables	<p>Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar</p>		<p>Supports ThinkVantage® technologies</p>	
eSATA port	None			
Diskette drive	None		<p>GREENGUARD® certified RoHS-compliant</p>	
Media reader	None			
Chipset	<p><b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>			
Rear ports	<p>Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>			
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>			
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>			
Audio	<p>High Definition (HD) Audio, Analog Devices AD1882 codec</p>			
Speaker	<p>One internal speaker for business audio</p>			
Ethernet	<p>Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0</p>			
Intel AMT	<p>Intel Active Management Technology (iAMT)</p>			
Modem	None			
Security chip	<p>Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>			
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>			
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>			
Power supply	<p>280 watts with variable speed fan, manual switch, two diagnostic LEDs</p>			
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>			
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435		
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675		
	DisplayPort to Single-link DVI-D Cable	45J7915		
	DisplayPort to VGA Monitor Cable	57Y4393		
	NVIDIA® Quadro® 256MB NVS 295	45K1669		
	More accessories on O-M58 sheet			
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			
• Rescue and Recovery™				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				

See footnotes for important warranty information  
 US models announced January 12 or February 23, 2010  
 US models withdrawn effective April 2010 or March 2012

# ThinkCentre® M58p Tower (9965) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	9965-A6U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 09
<b>M58p</b>	9965-A7U	4x4	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	None	vPro	XP Pro	None	Nov 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>		
Implementation	Processor in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>2GB or 4GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display				
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1				<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant
SATA controller	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA DVD±RW	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar				
SATA cables	None				
eSATA port	None				
Diskette drive	None				
Media reader	None				
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0				
Intel AMT	Intel Active Management Technology (iAMT)				
Modem	None				
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo				
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs				
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM	45J5434	<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>		
	2GB PC3-8500 DDR3 UDIMM	45J5435			
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990			
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918			
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620			
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675			
	DisplayPort to Single-link DVI-D Cable	45J7915			
	DisplayPort to VGA Monitor Cable	57Y4393			
	NVIDIA® Quadro® 256MB NVS 290	43R1765			
	NVIDIA Quadro 256MB NVS 295	45K1669			
	More accessories on O-M58 sheet				
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>				
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				

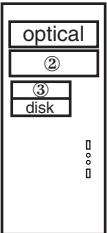
See footnotes for important warranty information  
 US models announced November 3, 2009  
 US models withdrawn effective April or October 2010

# ThinkCentre® M58p Tower (7188) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global Educ	Avail date
<b>M58p</b>	7188-ABU	4x4	Core 2 Duo E8400	3.00	2	1GB	160GB <sup>2</sup>	DVD	GMA	VGA, DP		None	vPro	Bus32	No	Nov 08
<b>M58p</b>	7188-ABU	4x4	Core 2 Duo E8400	3.00	2	1GB	160GB	DVD±RW	GMA	VGA, DP		None	vPro	Bus32	No	Nov 08
<b>M58p</b>	7188-A9U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD	<b>3470</b>	VGA, DP	DP-to-DVI-D	None	vPro	Bus32	No	Nov 08
<b>M58p</b>	7188-ACU	4x4	Core 2 Duo E8500	3.16	2	1GB	160GB	DVD	GMA	VGA, DP		None	vPro	Bus32	No	Nov 08
<b>M58p</b>	7188-AEU	4x4	Core 2 Duo E8500	3.16	2	1GB	250GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	None	vPro	Bus32	No	Nov 08
<b>M58p</b>	7188-ADU	4x4	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD	<b>3470</b>	VGA, DP		None	vPro	Bus32	No	Nov 08

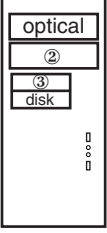
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500</b> with <b>dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache Processor in FC-LGA8 package in LGA775 socket										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>			
Implementation	Processor in FC-LGA8 package in LGA775 socket													
Memory	<b>1GB or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available													
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 253MB [1GB models], 765MB [2GB models]), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk			
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)* Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3			
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening													
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1													
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive													
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec													
Speaker	One internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0													
Intel AMT	Intel Active Management Technology (iAMT)													
Modem	None													
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo													
Power supply	280 watts with variable speed fan, autosenesing, two diagnostic LEDs, 80% PSU													
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ♦ Vista Premium logo													
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>													
<b>Accessories</b>	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 ThinkVision® L2440x Wide 24" Monitor 4421HB2 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635 NVIDIA Quadro® 256MB NVS 290 43R1765 NVIDIA Quadro 256MB NVS 295 45K1669 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
												<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>		

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective November 2009

Name	Type-model	Slot x bay	Processor	GHz	Mem-ory	Media reader	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Global Preload	Avail date
<b>M58p</b>	7188-AHU	4x4	Core 2 Duo E8400	3.00	2 2GB		160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	No Apr 09
<b>M58p</b>	7188-AJU	4x4	Core 2 Quad Q9400	2.66	4 4GB	25-in-1	320GB	DVD±RW	<b>9500GT</b>	DP, DVI-I		vPro	Bus64	No Apr 09

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**

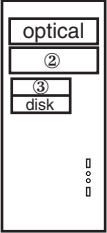
Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or</p> <p><b>Intel Core 2 Quad Processor Q9400</b> with <b>quad-core</b>, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache</p> <p>Processor in FC-LGA8 package in LGA775 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation	Processor in FC-LGA8 package in LGA775 socket											
Memory	<p><b>2GB or 4GB std, 8GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in two sockets; two sockets available;</p> <p><i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>										<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>	
Graphics	<p><i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b>, integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 9500 GT</b>, PCI Express® 2.0 x16 adapter, 512MB, one DisplayPort connector, one dual-link DVI-I connector, HDCP, DirectX 10.1, PureVideo® HD technology, 45 watts</p>										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)*</p> <p>Slot 2: half-length, full-height, PCIe x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
DP dongle	<i>Some:</i> DisplayPort to Single-link DVI-D Cable										* used in some models	
SATA disk	<b>160GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar											
eSATA port	None											
Diskette drive	None											
Media reader	<i>Some:</i> 25-in-1 media reader, internal USB 2.0											
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>AJU:</i> monitor (DisplayPort, DVI-I) <i>Others:</i> monitor (VGA DB-15, DisplayPort)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec											
Speaker	One internal speaker for business audio											
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0											
Intel AMT	Intel Active Management Technology (iAMT)											
Modem	None											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs, 80% PSU											
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>											
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC3-8500 DDR3 UDIMM	45J5434										
- <i>Some:</i> Genuine Windows Vista Business 64	2GB PC3-8500 DDR3 UDIMM	45J5435										
↔ <i>Vista models:</i> Vista Premium logo	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990										
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918										
• Rescue and Recovery™	USB 2.0 Lenovo Multimedia Headset	40Y8518										
• Client Security Solution™	USB 2.0 Lenovo Webcam	40Y8519										
• ThinkVantage Productivity Center	USB 2.0 Essential Memory Key 32GB	45K1258										
• ThinkVantage System Update	USB 2.0 Ultra Secure Memory Key 8GB	45J5918										
• ThinkVantage Power Manager (Vista)	USB 2.0 Portable Secure 320GB Hard Disk	43R2019										
• McAfee® VirusScan® Plus (30 days of virus definitions)	USB 2.0 Super Multi-Burner Drive	41N5565										
• Lenovo System Toolbox	Super Multi-Burner DL DVD±RW SATA Drive	41N5620										
• Adobe® Reader	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675										
• Microsoft® Office 2007 Trial (60-day)	ThinkVision® L2440x Wide 24" Monitor	4421HB2										
• Roxio® Creator® Business Edition (DVD±RW)	Lenovo USB Fingerprint Keyboard	73P4730										
• Roxio MyDVD® (DVD±RW)	Kensington Twin Head Cable Lock	45K1620										
• Corel® WinDVD® (DVD±RW)	DisplayPort to Single-link DVI-D Cable	45J7915										
	DisplayPort to VGA Monitor Cable	57Y4393										
	ATI™ Radeon™ HD 2400 XT 256MB	43R1962										
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636										
	NVIDIA GeForce 9500GT 512MB (DP, DVI)	45K1635										
	NVIDIA Quadro® 256MB NVS 290	43R1765										
	NVIDIA Quadro 256MB NVS 295	45K1669										
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											

See footnotes for important warranty information  
 US models announced April 7, 2009  
 US models withdrawn effective November 2009



Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	7484-B2U	4x4	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	None	Apr 09

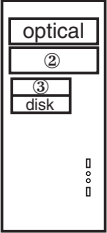
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **This model has a 3-year limited warranty<sup>1</sup>**

Positioning	<i>Mainstream enterprise stability and manageability</i>							<b>Tower</b>		
Processor	<b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache							<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in FC-LGA8 package in LGA775 socket							Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available							Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display							DisplayPort to Single-link DVI-D Cable		
DP dongle	DisplayPort to Single-link DVI-D Cable									
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts									
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1									
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive									
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar									
eSATA port	None									
Diskette drive	None									
Media reader	None									
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>							<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)									
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)									
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)									
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec									
Speaker	One internal speaker for business audio									
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0									
Intel AMT	Intel Active Management Technology (iAMT)									
Modem	None									
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo									
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo									
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs							Supports ThinkVantage® technologies		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			<b>Accessories</b>			1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 290 43R1765 NVIDIA Quadro 256MB NVS 295 45K1669 More accessories on O-M58 sheet			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			GREENGUARD® certified RoHS-compliant			
							<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>			

See footnotes for important warranty information  
 US model announced April 7, 2009  
 US model withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Preload	Global Educ	Avail date
<b>M58p</b>	7484-F1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	Educ	Aug 09
<b>M58p</b>	7484-B3U	4x4	Core 2 Quad Q9400	2.66	4	2GB	160GB	DVD±RW	GMA	VGA, DP		vPro	XP Pro		Jul 09
<b>M58p</b>	7484-F2U	4x4	Core 2 Quad Q9400	2.66	4	4GB	500GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	XP Pro	Educ	Aug 09

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>																											
Implementation	Processor in FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																											
Memory	<b>2GB or 4GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																											
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																											
DP dongle	SATA disk		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>																											
SATA controller	SATA DVD±RW		Supports ThinkVantage® technologies																											
SATA cables	eSATA port		GREENGUARD® certified																											
Diskette drive	Chipset		RoHS-compliant																											
Media reader	Intel <b>Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O		<b>Limited Warranty<sup>1</sup></b>																											
Chipset	Front ports		<ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																											
Chipset	Rear ports																													
Front ports	Internal connector																													
Rear ports	Rear audio ports																													
Internal connector	Audio																													
Rear audio ports	Speaker																													
Audio	Ethernet																													
Speaker	Intel AMT																													
Ethernet	Modem																													
Intel AMT	Security chip																													
Modem	Keyboard																													
Security chip	Mouse																													
Keyboard	Power supply																													
Mouse	Preloaded operating system <sup>20</sup>																													
Power supply	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)																													
	Preloaded applications <sup>5</sup>																													
	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>- VitalSource™ Library School Edition</li> <li>- Adobe® Elements</li> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>		<b>Accessories</b> <table border="0"> <tr><td>1GB PC3-8500 DDR3 UDIMM</td><td>45J5434</td></tr> <tr><td>2GB PC3-8500 DDR3 UDIMM</td><td>45J5435</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td><td>45K1675</td></tr> <tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr> <tr><td>DisplayPort to VGA Monitor Cable</td><td>57Y4393</td></tr> <tr><td>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 3470 256MB (DP, VGA)</td><td>45K1636</td></tr> <tr><td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td><td>45K1635</td></tr> <tr><td>NVIDIA Quadro® 256MB NVS 290</td><td>43R1765</td></tr> <tr><td>NVIDIA Quadro 256MB NVS 295</td><td>45K1669</td></tr> </table> <p>More accessories on O-M58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635	NVIDIA Quadro® 256MB NVS 290	43R1765	NVIDIA Quadro 256MB NVS 295	45K1669
1GB PC3-8500 DDR3 UDIMM	45J5434																													
2GB PC3-8500 DDR3 UDIMM	45J5435																													
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																													
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																													
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																													
Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675																													
DisplayPort to Single-link DVI-D Cable	45J7915																													
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ATI™ Radeon™ HD 2400 XT 256MB (2-DVI)	43R1962																													
ATI Radeon HD 3470 256MB (DP, VGA)	45K1636																													
NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635																													
NVIDIA Quadro® 256MB NVS 290	43R1765																													
NVIDIA Quadro 256MB NVS 295	45K1669																													

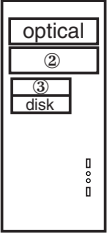
See footnotes for important warranty information  
US models announced June 16 or July 14, 2009  
US models withdrawn effective December 2009

# ThinkCentre® M58p Tower (7484) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	Intel vPro	Win7 preload	Global Educ	Avail date
<b>M58p</b>	7484-E1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		vPro	Pro 32	None	Oct 10
<b>M58p</b>	7484-D1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	vPro	Pro 32	None	Jan 10
<b>M58p</b>	7484-D9U	4x4	Core 2 Duo E8500	3.16	2	2GB	250GB	DVD±RW	GMA	VGA, DP		vPro	Pro 64	None	Oct 10

- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning	<i>Mainstream enterprise stability and manageability</i>	
Processor	<b>Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	
Implementation	Processor in LGA775 socket	
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> DisplayPort to Single-link DVI-D Cable	
DP dongle	Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	Intel Active Management Technology (iAMT)	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675
	DisplayPort to Single-link DVI-D Cable	45J7915
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	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)		
• Rescue and Recovery™		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• ThinkVantage Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Adobe Flash® Player		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
	<b>Tower</b>	
	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
		
	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
	Supports ThinkVantage® technologies	
	GREENGUARD® certified RoHS-compliant	
	<b>Limited Warranty<sup>1</sup></b>	
	<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US models announced December 15, 2009 or September 14, 2010  
 US models withdrawn effective March 2012

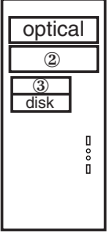


# ThinkCentre® M58p Tower (3063) - ES 5.0 (XP) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Global Preload	Avail date	
<b>M58p</b>	3063-B6U	4x4	Core 2 Duo E8400	3.00	2	2GB	320GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Oct 09
<b>M58p</b>	3063-B7U	4x4	Core 2 Duo E8400	3.00	2	2GB	320GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Oct 09
<b>M58p</b>	3063-B9U	4x4	Core 2 Duo E8500	3.16	2	2GB	320GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Oct 09
<b>M58p</b>	3063-B8U	4x4	Core 2 Duo E8500	3.16	2	2GB	320GB	DVD±RW	<b>3470</b>	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Oct 09
<b>M58p</b>	3063-BBU	4x4	Core 2 Quad Q9400	2.66	4	4GB	320GB	DVD±RW	GMA	VGA, DP	DP-to-DVI-D	ES50	vPro	XP Pro	No	Oct 09

• **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**  
 • **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400 or E8500 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9400 with quad-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket	
Memory	<b>2GB or 4GB std</b> , 16GB max <sup>9</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	
Graphics	<i>Some:</i> <b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ conn, HDCP, DirectX® 10, supports dual independent display <i>Some:</i> <b>ATI™ Radeon™ HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10.1, ATI Avivo™, 25 watts	
DP dongle	DisplayPort to Single-link DVI-D Cable	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)* Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3 * used in some models
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies  Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1 support	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0	
Intel AMT	Intel Active Management Technology (iAMT)	
Modem	None	
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional	1GB PC3-8500 DDR3 UDIMM 45J5434 2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 290 43R1765 NVIDIA Quadro 256MB NVS 295 45K1669 More accessories on O-M58 sheet	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• ThinkVantage System Update		
• McAfee® VirusScan® Plus (30 days of virus definitions)		
• Lenovo System Toolbox		
• Adobe® Reader®		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD±RW)		

See footnotes for important warranty information  
 US models announced October 22, 2009  
 US models withdrawn effective April or October 2010

# ThinkCentre® M58p Tower (3063) - ES 5.0 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	Chassis intr switch	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3063-BVU	4x4	Core 2 Duo E8400	3.00 2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP		None	ES50	vPro	Pro 32		Oct 10
3063-BSU	4x4	Core 2 Duo E8400	3.00 2	2GB	320GB	DVD±RW	GMA	VGA, DP	Switch	None	ES50	vPro	Pro 32	Gbl	Oct 10

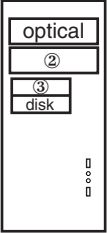
- **Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with <b>dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Tower</b>																	
Implementation	Processor in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																	
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																	
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some</i>: Chassis intrusion switch</li> </ul>																	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1																											
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										Supports ThinkVantage® technologies																	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar																											
eSATA port	None										Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant																	
Diskette drive	None																											
Media reader	None										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																	
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O																											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										Keyboard Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo Mouse Optical Wheel Mouse (USB connector), black, Lenovo logo Power supply 280 watts with variable speed fan, autosensing, 85% PSU																	
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 32																	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																											
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec										<b>Accessories</b> <table border="0"> <tr> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Blu-ray™ Burner SATA 1.5Gb/s Drive</td> <td>45K1675</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>NVIDIA® Quadro® 256MB NVS 295</td> <td>45K1669</td> </tr> <tr> <td>More accessories on O-M58 sheet</td> <td></td> </tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		2GB PC3-8500 DDR3 UDIMM	45J5435	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® Quadro® 256MB NVS 295	45K1669	More accessories on O-M58 sheet	
2GB PC3-8500 DDR3 UDIMM	45J5435																											
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																											
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DisplayPort to Single-link DVI-D Cable	45J7915																											
DisplayPort to VGA Monitor Cable	57Y4393																											
NVIDIA® Quadro® 256MB NVS 295	45K1669																											
More accessories on O-M58 sheet																												
Speaker	One internal speaker for business audio										<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>																	
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0																											
Intel AMT	Intel Active Management Technology (iAMT)										<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>																	
Modem	None																											
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>																	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																											
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo										<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>																	
Power supply	280 watts with variable speed fan, autosensing, 85% PSU																											

See footnotes for important warranty information  
 US models announced September 14 or 28, 2010  
 US models withdrawn effective March 2012

Name	Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58p</b>	6209-A1U	4x4	Core 2 Duo E8400	3.00 2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	None	vPro	Bus32	G P	Nov 08

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<b>Tower</b>		
Implementation	Processor in FC-LGA8 package in LGA775 socket										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	<b>2GB std</b> , 8GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0												
Intel AMT	Intel Active Management Technology (iAMT)												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, two diagnostic LEDs, 80% PSU												
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ◇ Vista Premium logo					<b>Accessories</b>					Supports ThinkVantage® technologies		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>										<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>NVIDIA Quadro® 256MB NVS 290 43R1765</li> <li>NVIDIA Quadro 256MB NVS 295 45K1669</li> <li>More accessories on O-M58 sheet</li> </ul>		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										GREENGUARD® certified RoHS-compliant		
											<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇐ 3-year parts and labor</li> <li>⇐ International Warranty Service<sup>9</sup></li> <li>⇐ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇐ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇐ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇐ Post warranty maintenance services available</li> <li>⇐ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
US model announced October 21, 2008  
US model withdrawn effective November 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>3</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	DisplayPort dongle	Intel vPro	Vista preload	Global (G) GMP (P)	Avail date
<b>M58p</b>	6138-A1U	4x4	Core 2 Duo E8400	3.00	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	vPro	Bus32	G P	Nov 08

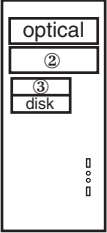
- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	Mainstream enterprise stability and manageability										<b>Tower</b>		
Processor	Intel® Core™ 2 Duo Processor E8400 with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in FC-LGA8 package in LGA775 socket										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk		
Memory	2GB std, 16GB max <sup>8</sup> , PC3-8500 1066MHz DDR3, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available										Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	Intel Graphics Media Accelerator 4500 (GMA 4500), integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display												
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	Intel Q45 Express Chipset (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), SMSC® SCH5617 Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0												
Intel AMT	Intel Active Management Technology (iAMT)												
Modem	None												
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo												
Power supply	280 watts with variable speed fan, manual switch, two diagnostic LEDs												
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® Vista® Business 32 ◇ Vista Premium logo					<b>Accessories</b>					45J5434 45J5435 43R1990 45J7918 41N5620 45K1675 45J7915 57Y4393 45K1669		
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>					1GB PC3-8500 DDR3 UDIMM 2GB PC3-8500 DDR3 UDIMM 500GB SATA 3.0Gb/s Disk (7200 rpm) 1TB SATA 3.0Gb/s Disk (7200 rpm) Super Multi-Burner DL DVD±RW SATA Drive Blu-ray™ Burner SATA 1.5Gb/s Drive DisplayPort to Single-link DVI-D Cable DisplayPort to VGA Monitor Cable NVIDIA® Quadro® 256MB NVS 295 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>					Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant		
<b>Limited Warranty<sup>1</sup></b>													
<ul style="list-style-type: none"> <li>⇨ 3-year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇨ Post warranty maintenance services available</li> <li>⇨ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>													

See footnotes for important warranty information  
 US model announced October 21, 2008  
 US model withdrawn effective August 2011

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	DisplayPort dongle	ENERGY STAR 5.0	Intel vPro	Win 7 preload	Global (G) GMP (P)	Avail date
<b>M58p</b>	3285-A1U	4x4	Core 2 Duo E8400	3.00	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	VGA, DP	None	ES50	vPro	Pro 32	G P	Oct 09

- Intel Core 2 Processor with vPro™ Technology (includes Intel Active Management Technology)
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Mainstream enterprise stability and manageability <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 4500 (GMA 4500)</b> , integrated graphics in Q45, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector (supports single-link DVI-D via cable 45J7915), HDCP, DirectX® 10, supports dual independent display		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without diskette, keyboard</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH10DO, RAID 0/1		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors and one eSATA connector on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q45 Express Chipset</b> (PCI Express® 2.0 x16), I/O Controller Hub 10 Digital Office [ICH10DO] (SATA 3.0Gb/s with RAID 0/1 support, PCI Express x1, ethernet MAC, PCI 2.3, USB, LPC bus), <b>SMSC® SCH5617 Super I/O</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Analog Devices AD1882 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Intel 82567LM, Wake on LAN®, ASF2.0, DASH 1.0		
Intel AMT	Intel Active Management Technology (iAMT)		
Modem	None		
Security chip	Winbond® WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system</b> <sup>20</sup>	- Genuine Windows® 7 Professional 32		Supports ThinkVantage® technologies
<b>Preloaded applications</b> <sup>5</sup> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>		Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
<b>Accessories</b>	2GB PC3-8500 DDR3 UDIMM 45J5435 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® Quadro® 256MB NVS 295 45K1669 More accessories on O-M58 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		<b>Limited Warranty</b> <sup>1</sup> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
 US model announced October 22, 2009  
 US model withdrawn effective March 2012

**Memory**

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234, and Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 use desktop memory:  
2GB PC3-8500 DDR3 UDIMM 45J5435 ann 11/18/08

More information at [www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

All:  
DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 ann 09/26/06  
Lenovo® Super Multi-Burner SATA Drive 0A65618 ann 08/23/11

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 support:  
Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 ann 03/31/09

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 ann 01/24/06  
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 ann 11/06/07  
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 ann 08/19/08

USB 2.0 Portable 320GB Hard Disk 45K1689 ann 03/17/09  
USB 2.0 Portable 500GB Hard Disk 45K1690 ann 05/26/09  
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ann 11/18/08  
USB 3.0 Secure 500GB Hard Drive 0A65619 ann 11/29/11  
USB 3.0 Secure 750GB Hard Drive 0A65616 ann 11/29/11  
Slim USB Portable DVD Burner 0A33988 ann 06/14/11

**Graphics**

Small 8910/7360/6258/7638/9964/7483/7220/6137/6234 support Low Profile:  
ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07  
NVIDIA® Quadro® 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) 0A36528 ann 04/26/11  
NVIDIA Quadro 512MB 400 (DP, DVI-I with a DVI to VGA converter) 0A36535 ann 06/28/11  
NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 ann 02/02/10  
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) 57Y4167 ann 03/02/10

Tower 9960/7373/6239/9965/7484/7188/6138/6209/3063/3285/9728/7639 support 75 watts max:  
ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ann 11/06/07  
NVIDIA Quadro 256MB NVS 295 (2-DP) 45K1669 ann 04/21/09  
NVIDIA Quadro 512MB NVS 450 (4-DP/4-DVI) 57Y4398 ann 01/19/10  
NVIDIA Quadro 512MB NVS 300 DMS59 0A36528 ann 04/26/11  
NVIDIA Quadro 512MB 400 (DP, DVI-I) 0A36535 ann 06/28/11  
NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) 57Y4479 ann 10/26/10  
NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 ann 02/02/10  
NVIDIA GeForce 310 512MB DMS59 57Y4167 ann 03/02/10

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard 73P5220 ann 06/21/05  
Preferred Pro Full Size PS/2 Keyboard 31P7415 ann 06/04/02  
Enhanced Performance USB Keyboard 73P2620 ann 03/23/04  
Ultraslim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 ann 04/05/11  
Lenovo USB Fingerprint Keyboard 73P4730 ann 02/22/05  
Lenovo USB Smartcard Keyboard 51J0155 ann 03/24/09  
<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB) 06P4069 ann 05/21/03  
Lenovo ScrollPoint® Mouse(USB, Optical) 31P7405 ann 08/27/02  
Lenovo Laser Mouse (USB) 41U3074 ann 01/23/07  
Lenovo Wireless Laser Mouse<sup>52</sup> 0A36188 ann 12/20/11

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones with mic<sup>60</sup> 57Y4488 ann 01/07/10  
<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 ann 12/29/03  
Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 ann 09/30/08  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 ann 08/24/10  
USB Gemplus GemPC Smart Card Reader 41N3040 ann 02/21/06  
<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 ann 10/20/09  
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)<sup>69</sup> 2448MB6 ann 09/13/11  
ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 ann 10/20/09  
ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 ann 10/20/09  
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)<sup>69</sup> 2572MB6 ann 09/13/11  
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)<sup>69</sup> 4420MB2 ann 09/13/11  
<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Eco Ultra Small 8820/7359/7637/9961/7479/6136 support:  
Lenovo Vertical PC and Monitor Stand II 41R4474 ann 01/27/09

**All:**

Lenovo USB-to-DVI Monitor Adapter 45K5296 ann 05/12/09  
DisplayPort™ to Single-link DVI-D Cable 45J7915 ann 08/05/08  
DisplayPort to VGA Monitor Cable 57Y4393 ann 08/04/09  
DisplayPort to DisplayPort Monitor Cable 0A36537 ann 09/13/11  
ThinkVision Soundbar 45K1263 ann 09/16/08  
Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 ann 12/29/03  
Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 ann 09/30/08  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 ann 08/24/10  
ThinkCentre Extend Arm 57Y4352 ann 07/06/10  
<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M70e Small and  
Lenovo ThinkCentre M70e Tower



Lenovo ThinkCentre M70e Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M70e Small  
with optional PS/2 keyboard and mouse ports



Lenovo ThinkCentre M70e Small  
with Lenovo ThinkVision monitor



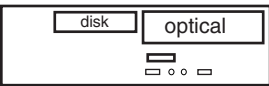
Lenovo ThinkCentre M70e Tower  
with optional PS/2 keyboard and mouse ports



Lenovo ThinkCentre M70e Tower

# ThinkCentre® M70e Small (0809) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

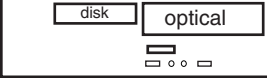
Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
0809-C5U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB <sup>2</sup>	DVD±RW	GMA	Pro 32	None	Aug 10
0809-F2U	4x3	Pentium E5800	3.20	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 64	None	Apr 11
0809-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0809-E6U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
0809-C6U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Aug 10
0809-F1U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 64	None	Apr 11
<ul style="list-style-type: none"> <li>• <b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> <li>• <b>These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>												
Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5500 or E5800 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 or E8500 with dual-core,</b> 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket							<b>Small</b> 				
Implementation								Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed				
Memory	<b>2GB, 3GB, or 4GB std, 4GB max<sup>8</sup>, PC3-8500 1066MHz DDR3,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available							Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3				
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500),</b> integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter							<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>				
SATA disk	<b>320GB or 500GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening SATA controller Serial ATA, SATA 3.0Gb/s, integrated in ICH7 SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), three SATA connectors on planar eSATA port None Diskette drive None Media reader None							<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>				
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)							Supports ThinkVantage® technologies				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	240 watts, autosensing, active Power Factor Correction											
<b>Preloaded operating system<sup>20</sup></b> - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64			<b>Accessories</b> 2GB PC3-8500 DDR3 UDIMM 45J5435 DisplayPort™ to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 More accessories on O-M70E sheet			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			<b>GREENGUARD® certified</b> RoHS-compliant			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>						<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>						

See footnotes for important warranty information  
 US models announced August 3, 2010, March 8, 2011, or March 22, 2011  
 US models withdrawn effective November 2011 or January 2012



Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
0822-B6U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	Pro 32	None	Aug 10


- **This model has a 1-year limited warranty<sup>1</sup>**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400 with dual-core</b> , 1333MHz system bus, and 6MB L2 cache		<b>Small</b>	
Implementation	Processor in LGA775 socket			
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter			
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar			
eSATA port	None		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>	
Diskette drive	None			
Media reader	None		Supports ThinkVantage® technologies	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		GREENGUARD® certified RoHS-compliant	
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		<p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	240 watts, autosenesing, active Power Factor Correction			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	DisplayPort™ to Single-link DVI-D Cable	45J7915		
• Rescue and Recovery™	DisplayPort to VGA Monitor Cable	57Y4393		
• ThinkVantage System Update	ADD2 DVI-D Monitor Connection (HDCP)	43R1985		
• ThinkVantage Power Manager	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397		
• ThinkVantage Toolbox	More accessories on O-M70E sheet			
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Adobe Flash® Player				
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				

See footnotes for important warranty information  
 US model announced August 3, 2010  
 US model withdrawn effective January 2012

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
0830-H8U	4x3	Pentium E5500	2.80	2MB	2	1GB	250GB <sup>2</sup>	DVD	GMA	Pro 32	None	Aug 10
0830-H9U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-M4U	4x3	Pentium E5700	3.00	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Mar 11
0830-F2U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-F4U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K1U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K7U	4x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K2U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
0830-K3U	4x3	Core 2 Quad Q9500	2.83	6MB	4	4GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10


- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Essential business features, exceptional value <b>Intel® Pentium® Processor E5500</b> or <b>E5700</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> or <b>E8500</b> with <b>dual-core</b> , 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9500</b> with <b>quad-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket	<b>Small</b>	
Implementation	Processor in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed	
Memory	<b>1GB, 2GB, 3GB, or 4GB</b> std, 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	240 watts, autosensing, active Power Factor Correction		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<b>Accessories</b> <ul style="list-style-type: none"> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>DisplayPort™ to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397</li> <li>More accessories on O-M70E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
US models announced August 3, 2010 or February 8, 2011  
US models withdrawn effective November 2011 or January 2012

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
0843-C3U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB <sup>2</sup>	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0843-C4U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0843-C5U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	DVD±RW	GMA	ES50	Pro 32	None	Aug 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5500 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 with dual-core</b> , 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Small</b> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB [2GB models] or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	240 watts, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	DisplayPort™ to Single-link DVI-D Cable	45J7915	
• Rescue and Recovery™	DisplayPort to VGA Monitor Cable	57Y4393	
• ThinkVantage System Update	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
• ThinkVantage Power Manager	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	
• ThinkVantage Toolbox	More accessories on O-M70E sheet		
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

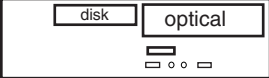
See footnotes for important warranty information  
US models announced August 3, 2010  
US models withdrawn effective November 2011 or January 2012

# ThinkCentre® M70e Small (0833) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Chassis intr switch	Win7 preload	Global (G) GMP (P)	Avail date
0833-B1U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB <sup>2</sup>	DVD±RW	GMA	Switch	Pro 32	G P	Aug 10

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Small</b> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: Low Profile, PCI Express x16 (40w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	240 watts, autosensing, active Power Factor Correction		
<b>Preloaded operating system</b> <sup>20</sup>	<b>Accessories</b>		Supports ThinkVantage® technologies
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435		GREENGUARD® certified RoHS-compliant
<b>Preloaded applications</b> <sup>5</sup> (only some listed)	DisplayPort™ to Single-link DVI-D Cable 45J7915		
• Rescue and Recovery™	DisplayPort to VGA Monitor Cable 57Y4393		<p><b>Limited Warranty</b><sup>1</sup></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
• ThinkVantage System Update	ADD2 DVI-D Monitor Connection (HDCP) 43R1985		
• ThinkVantage Power Manager	NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397		
• ThinkVantage Toolbox	More accessories on O-M70E sheet		
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

See footnotes for important warranty information  
US model announced August 3, 2010  
US model withdrawn effective January 2012

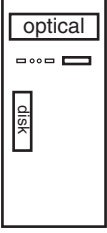
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(MANL1-5) January 2012

# ThinkCentre® M70e Tower (0806) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Graphics	Win7 preload	Global Educ	Avail date
0806-C1U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB <sup>2</sup>	None	DVD±RW		GMA	Pro 32	None	Aug 10
0806-E1U	4x3	Pentium E5800	3.20	2MB	2	2GB	320GB	None	DVD±RW		GMA	Pro 64	None	Apr 11
0806-B3U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0806-E2U	4x3	Core 2 Duo E7500	2.93	3MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 64	None	Apr 11
0806-D2U	4x3	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	Media	GMA	Pro 64	None	Mar 11
0806-C5U	4x3	Core 2 Duo E8400	3.00	6MB	2	4GB	500GB	None	DVD±RW		GMA	Pro 64	None	Aug 10

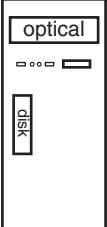
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5500</b> or <b>E5800</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with <b>dual-core</b> , 1333MHz system bus, and 6MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB, 3GB, or 4GB std</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>320GB</b> or <b>500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		<b>GREENGUARD® certified</b> <b>RoHS-compliant</b>
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Diskette drive	None		
Media reader	<i>Some:</i> Single Slot SD Media Card Reader		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435	
- <i>Some:</i> Genuine Windows 7 Professional 64	DisplayPort™ to Single-link DVI-D Cable	45J7915	
	DisplayPort to VGA Monitor Cable	57Y4393	
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	
	More accessories on O-M70E sheet		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

See footnotes for important warranty information  
 US models announced August 3, 2010, March 8, 2011, or March 22, 2011  
 US models withdrawn effective November 2011 or January 2012

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Graphics	Win7 preload	Global Educ	Avail date
0829-N3U	4x3	Pentium E5500	2.80	2MB	2	1GB	250GB <sup>2</sup>	None	DVD		GMA	Pro 32	None	Aug 10
0829-M6U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-T2U	4x3	Pentium E5700	3.00	2MB	2	2GB	320GB	None	DVD±RW	Media	GMA	Pro 32	None	Mar 11
0829-E9U	4x3	Core 2 Duo E7500	2.93	3MB	2	1GB	250GB	None	DVD		GMA	Pro 32	None	Aug 10
0829-F1U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-F3U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-N2U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-F6U	4x3	Core 2 Duo E8500	3.16	6MB	2	2GB	250GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-N4U	4x3	Core 2 Duo E8500	3.16	6MB	2	3GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10
0829-N5U	4x3	Core 2 Quad Q9500	2.83	6MB	4	4GB	320GB	None	DVD±RW		GMA	Pro 32	None	Aug 10

- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5500 or E5700 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 or E8500 with dual-core</b> , 1333MHz system bus, and 6MB L2 cache or <b>Intel Core 2 Quad Processor Q9500 with quad-core</b> , 1333MHz system bus, and 6MB L2 cache		<b>Tower</b>	
Implementation	Processor in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless top cover removal</li> <li>• Highlighted optical drive button for easy access</li> </ul>	
Memory	<b>1GB, 2GB, 3GB, or 4GB std</b> , 4GB max <sup>a</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar			
eSATA port	None		Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
Diskette drive	None			
Media reader	<i>Some:</i> Single Slot SD Media Card Reader			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM		45J5435	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	DVD-ROM DL SATA 1.5Gb/s 16-48X Max		41N5618	
• Rescue and Recovery™	DisplayPort™ to Single-link DVI-D Cable		45J7915	
• ThinkVantage System Update	DisplayPort to VGA Monitor Cable		57Y4393	
• ThinkVantage Power Manager	ADD2 DVI-D Monitor Connection (HDCP)		43R1985	
• ThinkVantage Toolbox	NVIDIA® GeForce® 310 512MB (DP, VGA)		57Y4397	
• Norton™ Internet Security 2011 (30 days of virus definitions)	More accessories on O-M70E sheet			
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Adobe Flash® Player	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				

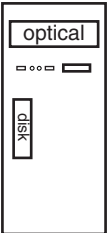
See footnotes for important warranty information  
 US models announced August 3, 2010 or February 8, 2011  
 US models withdrawn effective November 2011 or January 2012

# ThinkCentre® M70e Tower (0842) - ES 5.0 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
0842-C1U	4x3	Pentium E5500	2.80	2MB	2	2GB	320GB <sup>2</sup>	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0842-C3U	4x3	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10
0842-C4U	4x3	Core 2 Duo E8400	3.00	6MB	2	3GB	320GB	None	DVD±RW	GMA	ES50	Pro 32	None	Aug 10

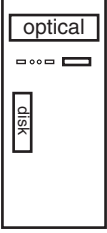
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® Processor E5500</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400</b> with dual-core, 1333MHz system bus, and 6MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation	Processor in LGA775 socket		
Memory	<b>2GB</b> or <b>3GB std.</b> , 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available		
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB [2GB models] or 1277MB [3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed  Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		Supports ThinkVantage® technologies
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		Climate Savers®-compliant EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		<b>Preloaded operating system<sup>20</sup></b> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32</li> </ul> <b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Accessories	2GB PC3-8500 DDR3 UDIMM 45J5435 DisplayPort™ to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 More accessories on O-M70E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced August 3, 2010  
 US models withdrawn effective November 2011 or January 2012

Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>3</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Win7 preload	Global (G) GMP (P)	Avail date
0832-B1U	4x3	Core 2 Duo E8400	3.00	6MB	2	2GB	250GB <sup>2</sup>	None	DVD±RW	GMA	Switch	Pro 32	G P	Aug 10

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Core™ 2 Duo Processor E8400</b> with dual-core, 1333MHz system bus, and 6MB L2 cache Processor in LGA775 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless top cover removal</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation			
Memory	<b>2GB std</b> , 4GB max <sup>3</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed  Slot 1: half-length, full-height, PCI Express x16 (60w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system</b> <sup>20</sup>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM	45J5435	
	DisplayPort™ to Single-link DVI-D Cable	45J7915	
<b>Preloaded applications</b> <sup>5</sup> (only some listed)	DisplayPort to VGA Monitor Cable	57Y4393	
• Rescue and Recovery™	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	
• ThinkVantage System Update	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	
• ThinkVantage Power Manager	More accessories on O-M70E sheet		
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
			<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>
			Supports ThinkVantage® technologies
			GREENGUARD® certified RoHS-compliant
			<b>Limited Warranty</b> <sup>1</sup> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>3</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
 US model announced August 3, 2010  
 US models withdrawn effective January 2012



**Memory**2GB PC3-8500 DDR3 UDIMM 45J5435 *ann 11/18/08*

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)**Optical**DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 *ann 09/26/06*  
Lenovo® Super Multi-Burner SATA Drive 0A65618 *ann 08/23/11***Storage and removable storage**250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*  
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*  
1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 *ann 08/19/08*  
USB 2.0 Portable 320GB Hard Disk 45K1689 *ann 03/17/09*  
USB 2.0 Portable 500GB Hard Disk 45K1690 *ann 05/26/09*  
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*  
USB 3.0 Secure 500GB Hard Drive 0A65619 *ann 11/29/11*  
USB 3.0 Secure 750GB Hard Drive 0A65616 *ann 11/29/11*  
Slim USB Portable DVD Burner 0A33988 *ann 06/14/11***Graphics***Small 0809/0822/0830/0833/0843 support Low Profile:*DisplayPort™ to Single-link DVI-D Cable<sup>50</sup> 45J7915 *ann 08/05/08*  
DisplayPort to VGA Monitor Cable<sup>50</sup> 57Y4393 *ann 08/04/09*  
DisplayPort to DisplayPort Monitor Cable<sup>50</sup> 0A36537 *ann 09/13/11*  
ADD2 DVI-D Monitor Connection (HDCP) 43R1985 *ann 11/06/07*  
NVIDIA® Quadro® 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) 0A36528 *ann 04/26/11*  
NVIDIA Quadro 512MB 400 (DP, DVI with a DVI to VGA converter) 0A36535 *ann 06/28/11*  
NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*  
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) 57Y4167 *ann 03/02/10**Tower 0806/0829/0832/0842 support:*DisplayPort to Single-link DVI-D Cable<sup>50</sup> 45J7915 *ann 08/05/08*  
DisplayPort to VGA Monitor Cable<sup>50</sup> 57Y4393 *ann 08/04/09*  
DisplayPort to DisplayPort Monitor Cable<sup>50</sup> 0A36537 *ann 09/13/11*  
ADD2 DVI-D Monitor Connection (HDCP) 43R1985 *ann 11/06/07*  
NVIDIA Quadro 512MB NVS 300 DMS59 0A36528 *ann 04/26/11*  
NVIDIA Quadro 512MB 400 (DP, DVI) 0A36535 *ann 06/28/11*  
NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) 57Y4479 *ann 10/26/10*  
NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*  
NVIDIA GeForce 310 512MB DMS59 57Y4167 *ann 03/02/10*<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphic card.More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)**Keyboard**Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*  
Preferred Pro Full Size PS/2 Keyboard 31P7415 *ann 06/04/02*  
Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*  
Ultraslim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 *ann 04/05/11*  
ThinkPad USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*  
Lenovo USB Fingerprint Keyboard 73P4730 *ann 02/22/05*<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)**Mouse**Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*  
ThinkPad® USB Laser Mouse 57Y4635 *ann 12/15/09*  
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 *ann 08/27/02*  
Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*  
Lenovo Wireless Laser Mouse<sup>52</sup> 0A36188 *ann 12/20/11*More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)**Multimedia**ThinkPad In-Ear Headphones with mic<sup>60</sup> 57Y4488 *ann 01/07/10*  
<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**USB 2.0 Lenovo Modem 43R1814 *ann 02/26/08***Security**Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*  
<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 *ann 10/20/09*  
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)<sup>69</sup> 2448MB6 *ann 09/13/11*  
ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 *ann 10/20/09*  
ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 *ann 10/20/09*  
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)<sup>69</sup> 2572MB6 *ann 09/13/11*  
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)<sup>69</sup> 4420MB2 *ann 09/13/11*  
<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)**Monitor Accessories<sup>46</sup>**ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 *ann 11/11/08*  
Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*  
ThinkVision Soundbar 45K1263 *ann 09/16/08*  
Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*  
<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M71e Small and  
Lenovo ThinkCentre M71e Tower



Lenovo ThinkCentre M71e Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M71e Small



Lenovo ThinkCentre M71e Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M71e Tower



Lenovo ThinkCentre M71e Tower

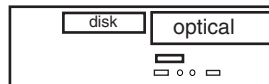
# ThinkCentre® M71e Small (3134) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3134-A7U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-A8U	3x3	Pentium G840	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-A9U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B6U	3x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B8U	3x3	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64
3134-B9U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Live</li> <li>● Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, active Power Factor Correction		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.2" W X 15.0" D X 3.9" H</li> <li>● 335mm W X 382mm D X 99mm H</li> <li>● 14.5 lb (6.6 kg) in maximum configuration</li> <li>● Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed		
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1		
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
			<b>Security</b> <ul style="list-style-type: none"> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul> GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet




See footnotes for important warranty information  
 US models announced June 7, August 9, or September 6, 2011  
 US models withdrawn effective July or November 2012

# ThinkCentre® M71e Small (3134) - TopS - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
3134-B5U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	Media	Switch	Stand	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>				
Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications<sup>20</sup></b> (only some listed)				
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display											
DP dongle	None											
Disk	SATA 3.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar											
eSATA port	None											
Media reader	9-in-1 media reader, internal USB 2.0											
Chipset	<b>Intel H61 Express Chipset</b>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed											
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1											
												
								<b>Security</b>				
								<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>				
								GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced June 21, 2011  
 US model withdrawn effective August 2011


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 (MOSC1-9) August 2011

# ThinkCentre® M71e Small (3134) - TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload	Ann date (mm/dd/yy)
3134-C1U	3x3	Core i3-2130	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/06/11
3134-C2U	3x3	Pentium G850	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/06/11
3134-C3U	3x3	Pentium G630	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11
3134-C4U	3x3	Pentium G850	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11
3134-C5U	3x3	Core i3-2120	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	12/13/11
3134-C6U	3x3	Pentium G850	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	02/21/12

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Live</li> <li>● Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, active Power Factor Correction		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.2" W X 15.0" D X 3.9" H</li> <li>● 335mm W X 382mm D X 99mm H</li> <li>● 14.5 lb (6.6 kg) in maximum configuration</li> <li>● Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed		
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1		
			
	<b>Security</b> <ul style="list-style-type: none"> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>		
	GREENGUARD® certified RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet		
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information  
 US models announced Dec 6, 2011, Dec 13, 2011 or February 21, 2012  
 US models withdrawn effective November 2012


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 (MOSC1-14) November 2012

# ThinkCentre® M71e Small (3157) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3157-C2U	3x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C5U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C6U	3x3	Pentium G840	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C7U	3x3	Pentium G620	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C8U	3x3	Pentium G620	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-C9U	3x3	Core i5-2400	4GBx2 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	N N	Pro 64
3157-F1U	3x3	Pentium G850	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<i>Essential business features, exceptional value</i> <b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Implementation	Processor in LGA1155 socket	
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets	
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display	
DP dongle	None	
Disk	SATA 3.0Gb/s 7200 rpm	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset	
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar	
eSATA port	None	
Media reader	None	
Chipset	<b>Intel H61 Express Chipset</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo	
Floor Stand	System floor stand for vertical orientation	
Power supply	240 watts, autosensing, active Power Factor Correction	
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>	
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed	
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1	
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <b>Some:</b> Chassis intrusion switch</li> </ul> <b>GREENGUARD® certified</b> <b>RoHS-compliant</b> <b>Supports ThinkVantage Technologies</b> For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information  
 US models announced June 7 or December 6, 2011  
 US models withdrawn effective July or November 2012

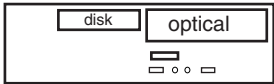
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 (MOSC1-2) November 2012

# ThinkCentre® M71e Small (3157) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload	Ann date (mm/dd/yy)
3157-G9U	3x3	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	01/24/12
3157-H1U	3x3	Pentium G850	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	01/24/12
3157-H2U	3x3	Pentium G630	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	Stand	None	N N	Pro 64	01/24/12

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<b>Preloaded operating system</b>	
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	
Implementation	Processor in LGA1155 socket			
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets			
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	<b>Intel H61 Express Chipset</b>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
				
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies	
			For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet	

See footnotes for important warranty information  
 US models announced January 24, 2012  
 US models withdrawn effective November 2012


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# ThinkCentre® M71e Small (3176) - ES 5.2 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
3176-A6U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	N N	Pro 64
3176-B7U	3x3	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	Stand	ES5.2	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>										
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										
Implementation	Processor in LGA1155 socket										
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets										
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display										
DP dongle	None										
Disk	SATA 3.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset										
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel H61 Express Chipset</b>										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
IEEE 1394	None										
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Floor Stand	System floor stand for vertical orientation										
Power supply	240 watts, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed										
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1										
											
	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>										
	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>										
	Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant										
	Supports ThinkVantage Technologies										
	For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet										
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information  
 US models announced June 7, 2011 or January 24, 2012  
 US models withdrawn effective November 2012

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# ThinkCentre® M71e Small (3167) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
3167-A1U	3x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	None	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<b>Preloaded operating system</b>	
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		Genuine Windows® 7 Professional 32	
Implementation	Processor in LGA1155 socket		<b>Preloaded applications<sup>20</sup></b> (only some listed)	
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display			
DP dongle	None			
Disk	SATA 3.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset			
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar			
eSATA port	None			
Media reader	None			
Chipset	<b>Intel H61 Express Chipset</b>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	System floor stand for vertical orientation			
Power supply	240 watts, autosensing, active Power Factor Correction			
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed			
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1			
				
			<b>Security</b>	
			<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>	
			GREENGUARD® certified RoHS-compliant	
			Supports ThinkVantage Technologies	
			For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information  
 US model announced June 7, 2011  
 US model withdrawn effective November 2012

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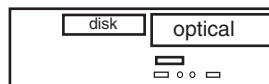
# ThinkCentre® M71e Small (5033) - ES 5.2 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Chassis intr switch	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
5033-A1U	3x3	Core i3-2100	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	G P	Pro 64
5033-A2U	3x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	G P	Pro 64
5033-A3U	3x3	Core i3-2120	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Switch	Stand	ES5.2	G P	Pro 64

- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed)					
Implementation	Processor in LGA1155 socket							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets												
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display												
DP dongle	None												
Disk	SATA 3.0Gb/s 7200 rpm												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset												
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar												
eSATA port	None												
Media reader	None												
Chipset	<b>Intel H61 Express Chipset</b>												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	Internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo												
Floor Stand	System floor stand for vertical orientation												
Power supply	240 watts, autosensing, 85% PSU												
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.5 lb (6.6 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> </ul>							<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed							Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant					
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1							Supports ThinkVantage Technologies					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet					



See footnotes for important warranty information  
 US models announced July 26, 2011 or February 21, 2012  
 US models withdrawn effective November 2012

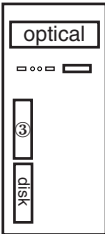
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 (MOSC1-12) November 2012

# ThinkCentre® M71e Tower (3129) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
3129-A9U	3x4	Core i3-2100	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	Media	None	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 1-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>				
Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications<sup>20</sup></b> (only some listed)				
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● Password Manager</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Live</li> <li>● Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display											
DP dongle	None											
Disk	SATA 3.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar											
eSATA port	None											
Media reader	9-in-1 media reader, internal USB 2.0											
Chipset	<b>Intel H61 Express Chipset</b>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.3" W X 16.6" D X 15.3" H</li> <li>● 160mm W X 422mm D X 388mm H</li> <li>● 20.7 lb (9.4 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Highlighted optical drive button for easy access</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed											
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1											
								<b>Security</b>				
								<ul style="list-style-type: none"> <li>● One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>				
								GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
								For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet				
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US model announced June 21, 2011  
 US model withdrawn effective August 2011

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 (MOSC1-10) August 2011

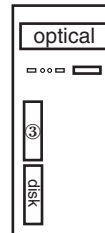
# ThinkCentre® M71e Tower (3133) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3133-A2U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A3U	3x4	Pentium G840	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A4U	3x4	Pentium G620	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A6U	3x4	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A8U	3x4	Core i3-2120	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3133-A9U	3x4	Pentium G630	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<p><b>Preloaded operating system</b></p> <p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications<sup>20</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>		
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 1.5", .35" high, access, opt reader*</p> <p>Bay 3: 3.5", 1" high, no access, opt disk</p> <p>Bay 4: 3.5", 1" high, no access, std disk</p> <p>*bay only available on models with media reader installed</p>		
Slot	<p>Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, PCIe 2.0 x1</p>		
Limited Warranty <sup>1</sup>	<p><b>3-years, limited onsite service</b>, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</p>		



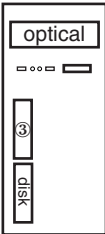
See footnotes for important warranty information  
 US models announced June 7, August 9, or September 6, 2011  
 US models withdrawn effective July or November 2012

# ThinkCentre® M71e Tower (3133) - TopS - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
3133-A5U	3x4	Pentium G620	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	Media	None	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>						<b>Preloaded operating system</b>					
Processor	Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64					
Implementation	Processor in LGA1155 socket						<b>Preloaded applications<sup>20</sup></b> (only some listed)					
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display											
DP dongle	None											
Disk	SATA 3.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar											
eSATA port	None											
Media reader	9-in-1 media reader, internal USB 2.0											
Chipset	<b>Intel H61 Express Chipset</b>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed											
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1											
							<b>Security</b>					
							<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
							GREENGUARD® certified RoHS-compliant					
							Supports ThinkVantage Technologies					
							For compatible accessories, please go to O-M71E sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US model announced June 21, 2011  
 US model withdrawn effective August 2011

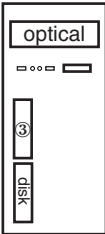
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 (MOSC1-11) August 2011

# ThinkCentre® M71e Tower (3133) - TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload	Ann date (mm/dd/yy)
3133-B1U	3x4	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/06/11
3133-B2U	3x4	Pentium G850	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/06/11
3133-B3U	3x4	Pentium G630	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11
3133-B4U	3x4	Pentium G850	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11
3133-B5U	3x4	Core i3-2120	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	12/13/11
3133-B6U	3x4	Pentium G850	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64	02/21/12

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
DP dongle	None		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed		
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1		
			
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                     <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced Dec 6, 2011, Dec 13, 2011 or February 21, 2012  
 US models withdrawn effective November 2012

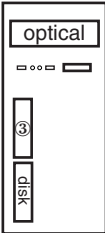
# ThinkCentre® M71e Tower (3156) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3156-C8U	3x4	Core i5-2400	4GBx2 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-C9U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-D1U	3x4	Pentium G840	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-D2U	3x4	Pentium G620	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	N N	Pro 64
3156-F1U	3x4	Pentium G850	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64
3156-F2U	3x4	Core i3-2120	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	None	N N	Pro 64

● These models have a 3-year limited warranty

● These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Essential business features, exceptional value</i></p> <p><b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b>, Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>	<p><b>Preloaded operating system</b></p> <p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications<sup>20</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Live</li> <li>● Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Implementation	Processor in LGA1155 socket	
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets	
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display	
DP dongle	None	
Disk	SATA 3.0Gb/s 7200 rpm	
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset	
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar	
eSATA port	None	
Media reader	None	
Chipset	<b>Intel H61 Express Chipset</b>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.3" W X 16.6" D X 15.3" H</li> <li>● 160mm W X 422mm D X 388mm H</li> <li>● 20.7 lb (9.4 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Highlighted optical drive button for easy access</li> </ul>	
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 1.5", .35" high, access, opt reader*</p> <p>Bay 3: 3.5", 1" high, no access, opt disk</p> <p>Bay 4: 3.5", 1" high, no access, std disk</p> <p>*bay only available on models with media reader installed</p>	
Slot	<p>Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, PCIe 2.0 x1</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>● One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> <li>● Some: Chassis intrusion switch</li> </ul> <p>GREENGUARD® certified RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available	

See footnotes for important warranty information

US models announced June 7, 2011, December 6, 2011, or February 21, 2012

US models withdrawn effective July or November 2012

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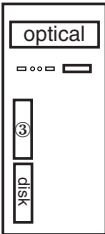
(MOSC1-6) November 2012

# ThinkCentre® M71e Tower (3175) - ES 5.2 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global Educ	Win7 preload
3175-B2U	3x4	Core i3-2100	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	N N	Pro 64

- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>				
Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications<sup>20</sup></b> (only some listed)				
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display											
DP dongle	None											
Disk	SATA 3.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel H61 Express Chipset</b>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed							<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul> Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant				
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1											
												
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US model announced June 7, 2011  
 US model withdrawn effective November 2012

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 (MOSC1-7) November 2012

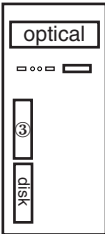


# ThinkCentre® M71e Tower (3166) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
3166-A1U	3x4	Core i3-2100	2GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	None	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>				
Processor	Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache), Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 32				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications<sup>20</sup></b> (only some listed)				
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display											
DP dongle	None											
Disk	SATA 3.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel H61 Express Chipset</b>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	None											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed											
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1											
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul> GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced June 7, 2011  
 US model withdrawn effective November 2012

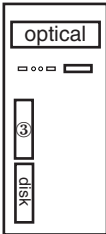
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 (MOSC1-8) November 2012

# ThinkCentre® M71e Tower (3177) - ES 5.2 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Chassis intr switch	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
3177-A1U	3x4	Core i3-2100	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	G P	Pro 64
3177-A2U	3x4	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	G P	Pro 64
3177-A3U	3x4	Core i3-2120	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	Switch	ES5.2	G P	Pro 64

- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Essential business features, exceptional value</i>							<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed)					
Implementation	Processor in LGA1155 socket							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets												
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display												
DP dongle	None												
Disk	SATA 3.0Gb/s 7200 rpm												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset												
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar												
eSATA port	None												
Media reader	None												
Chipset	<b>Intel H61 Express Chipset</b>												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), VGA DB-15, DVI-D												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	Internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, 85% PSU												
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 20.7 lb (9.4 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>												
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, opt disk Bay 4: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed												
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1							<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul> Climate Saver-compliant EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							Supports ThinkVantage Technologies  For compatible accessories, please go to O-M71E sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced July 26, 2011 or February 21, 2012  
 US models withdrawn effective November 2012

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 (MOSC1-13) November 2012

**Memory**

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Graphics**

Small 3134/3157/3176/3167/5033 support Low Profile:

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable <sup>50</sup>	0A36537	ann 09/13/11
NVIDIA® Quadro® 256MB NVS 295 (2-DP) <sup>67</sup>	45K1669	ann 04/21/09
NVIDIA Quadro 1GB 600 (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36183	ann 10/26/10
NVIDIA Quadro 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) <sup>67</sup>	0A36528	ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36535	ann 06/28/11
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) <sup>67</sup>	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36538	ann 05/29/12

Tower 3133/3156/3175/3166/3177 support:

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
DisplayPort to DisplayPort Monitor Cable <sup>50</sup>	0A36537	ann 09/13/11
NVIDIA Quadro 256MB NVS 295 (2-DP) <sup>67</sup>	45K1669	ann 04/21/09
NVIDIA Quadro 1GB 600 (DP, DVI-I) <sup>67</sup>	0A36183	ann 10/26/10
NVIDIA Quadro 512MB NVS 300 DMS59 <sup>67</sup>	0A36528	ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI-I) <sup>67</sup>	0A36535	ann 06/28/11
NVIDIA GeForce 310 512MB DMS59 <sup>67</sup>	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I) <sup>67</sup>	0A36538	ann 05/29/12

<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphic card.

<sup>67</sup> Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
UltraSlim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 <sup>52</sup>	57Y6336	ann 12/08/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic <sup>60</sup>	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Modem**

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann 09/13/11

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M71z All-In-One  
(Wireless Keyboard & mouse on selected models only)



Lenovo ThinkCentre M71z All-In-One



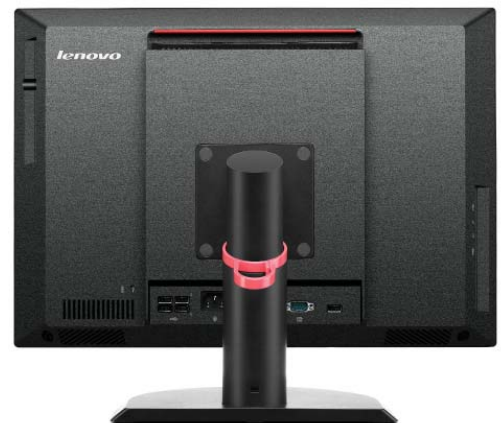
Lenovo ThinkCentre M71z All-In-One



Handle



Lenovo ThinkCentre M71z with Frame Stand



Lenovo ThinkCentre M71z with Monitor Stand

# ThinkCentre® M71z (1761) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse Global	Win7 preload
1761-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None Pro 64
1761-A2U	G840	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None Pro 64
1761-A3U	G620	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None Pro 64
1761-B1U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None Pro 64
1761-B3U	G530	2GBx1	20.0" HD+	None	320G 7200	DVD±RW	Intel HD	None	None	Serial	None	None	USB	None Pro 64

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>All-In-One PC for the enterprise</i></p> <p><b>Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>										<p><b>Preloaded operating system</b><sup>20</sup> Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications</b><sup>14</sup> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Implementation	Processor in LGA1155 socket													
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<p><b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i></p>													
DP dongle	None													
Display	<p><b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b>, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio</p>													
Multi-touch	None													
Camera	<p><i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off</p>													
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off													
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	None													
Chipset	<b>Intel H61 Express Chipset</b>													
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN <sup>4</sup>	<p><i>Some:</i> 11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2</p>													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB													
Audio	High Definition (HD) Audio, Realtek ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	<p><i>Model(s) with Non multi-touch, Frame stand:</i></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>										<p>EPEAT™ Gold rating</p> <p>Climate Saver-compliant</p> <p>ENERGY STAR® 5.2-compliant</p> <p>TCO Certified Edge</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p>			
Limited Warranty <sup>12</sup>	<p><b>3-years, limited onsite service</b><sup>24</sup>, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades<sup>22</sup> available</p>										<p>For compatible accessories, please go to O-M71Z sheet;</p> <p>For Lenovo service upgrade options, please go to S-TC sheet</p>			

See footnotes for important warranty information  
 US models announced Aug 9, Aug 23, or Sep 20, 2011  
 US models withdrawn effective July or November 2012

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 (MTGB1-1) November 2012

# ThinkCentre® M71z (1761) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)	
1761-B4U	i5-2500S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	11/08/11
1761-B5U	i3-2130	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	11/08/11
1761-B6U	G850	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	11/08/11
1761-B7U	i3-2130	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 32	11/08/11
1761-B8U	G440	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64	11/08/11

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system</b>			
Processor	<b>Intel® Celeron® G440 Processor (1 cores / 1 threads, 1.6GHz, 1MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium® G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64  <b>Preloaded applications<sup>14</sup></b> (only some listed)			
Implementation	Processor in LGA1155 socket											<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> </ul>			
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)											<ul style="list-style-type: none"> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>											EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											Supports ThinkVantage Technologies  For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information  
 US models announced November 8, 2011  
 US models withdrawn effective November 2012

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 (MTGB1-8) November 2012

# ThinkCentre® M71z (1761) - TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen (mega-display)	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Stand type	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)
1761-B2U	G630	2GBx1	20.0" HD+	2.0M	320G 7200 DVD±RW		Intel HD 11b/g/n	None	Serial	None	Frame	USB	None	Pro 64	12/06/11
1761-C5U	i7-2600S	4GBx2	20.0" HD+	2.0M	500G 7200 DVD±RW		Intel HD 11b/g/n	Media	Serial	None	Monitor	USB	None	Pro 64	12/06/11
1761-C6U	i5-2400S	4GBx1	20.0" HD+	2.0M	320G 7200 DVD±RW		Intel HD 11b/g/n	Media	Serial	None	Frame	USB	None	Pro 64	12/06/11
1761-C7U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200 DVD±RW		Intel HD 11b/g/n	Media	Serial	None	Frame	USB	None	Pro 64	12/06/11
<ul style="list-style-type: none"> <li>• Best space saving solution &amp; excellent cable management</li> <li>• These small and medium business (SMB) models are part of the US TopSeller™ Program</li> <li>• These models have a 3-year limited warranty</li> <li>• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)</li> </ul>															
Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system</b> <sup>20</sup>			
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller											Genuine Windows® 7 Professional 64 <b>Preloaded applications</b> <sup>14</sup> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Implementation	Processor in LGA1155 socket														
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul> <i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 8.4" D X 17.0" H</li> <li>• 507mm W X 213mm D X 431mm H (including stand)</li> <li>• 20.0 lb (9.1 kg) in maximum configuration</li> <li>• Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°</li> <li>• Support VESA mount (100mm)</li> </ul>														
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service</b> <sup>24</sup> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul> EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information  
 US models announced December 6, 2011  
 US models withdrawn effective November 2012

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 (MTGB1-9) November 2012

# ThinkCentre® M71z (1761) - TopSeller - IV - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card	Media reader	Chassis intr switch	Serial port	PS/2 port	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)
1761-D7U	G530	2GBx1	20.0" HD+	None	250G 7200 DVD±RW	Intel HD	None	None	None	None	Serial	None	USB	None	Pro 64 12/13/11
1761-D8U	G630	2GBx1	20.0" HD+	2.0M	250G 7200 DVD±RW	Intel HD	11b/g/n	None	None	None	Serial	None	USB	None	Pro 64 12/13/11
1761-D9U	i3-2120	4GBx1	20.0" HD+	2.0M	250G 7200 DVD±RW	Intel HD	11b/g/n	None	None	None	Serial	None	USB	None	Pro 64 12/13/11

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows <sup>®</sup> 7 Professional 64 <b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage<sup>®</sup> System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe<sup>®</sup> Reader<sup>®</sup></li> <li>● Skype™ for Windows</li> <li>● Microsoft<sup>®</sup> Office 2010 preloaded; purchase product key to activate</li> <li>● Corel<sup>®</sup> Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory<sup>®</sup> (DVD±RW)</li> <li>● Corel WinDVD<sup>®</sup> (DVD±RW)</li> </ul>
Processor	<b>Intel<sup>®</sup> Celeron<sup>®</sup> G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium<sup>®</sup> G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											
Implementation	Processor in LGA1155 socket											
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX <sup>®</sup> 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>											
DP dongle	None											
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio											
Multi-touch	None											
Camera	<i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off											
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off											
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm											
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel H61 Express Chipset</b>											
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector											
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
PCIe Mini Card	One PCI Express <sup>®</sup> Mini Card slot											
PCIe WLAN <sup>4</sup>	<i>Some:</i> 11b/g/n wireless, Mini PCIe adapter, Broadcom <sup>®</sup> BCM43227, 2x2											
Bluetooth™	None											
Ethernet	One gigabit ethernet port, Realtek <sup>®</sup> RTL8111E-VB											
Audio	High Definition (HD) Audio, Realtek ALC269Q											
Speaker	Two internal stereo speakers (2x2w) with amplifier											
Intel AMT	None											
Modem	None											
IEEE 1394	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo											
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo											
Power supply	150 watts, autosensing, 85% PSU											
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>● Business black color</li> <li>● 20.0" W X 4.0" D X 16.2" H</li> <li>● 507mm W X 101mm D X 411mm H (including stand)</li> <li>● 16.4 lb (7.5 kg) in maximum configuration</li> <li>● Handle in rear</li> <li>● Support VESA mount (100mm)</li> <li>● Removable feet</li> </ul>											
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											
	<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington<sup>®</sup> MicroSaver<sup>®</sup> cable; Kensington lock also locks chassis)</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● USB port disablement</li> </ul> EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR <sup>®</sup> 5.2-compliant TCO Certified Edge GREENGUARD <sup>®</sup> certified RoHS-compliant Supports ThinkVantage Technologies											
	For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet											

See footnotes for important warranty information  
 US models announced December 13, 2011  
 US models withdrawn effective November 2012

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# ThinkCentre® M71z (1761) - TopSeller - V - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen (mega-pixel)	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intr switch	Serial port	PS/2 port	Stand type	Keyboard /Mouse Global	Win7 preload	Ann date (mm/dd/yy)	
1761-E1U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	Serial	None	Frame	USB	None	Pro 64	02/21/12
1761-E2U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	Media	None	Serial	None	Frame	2.4G	None	Pro 64	02/21/12
1761-E3U	G630	2GBx1	20.0" HD+	2.0M	250G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	02/21/12
1761-E4U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	03/06/12
1761-E5U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	03/06/12
1761-E6U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	2.4G	None	Pro 64	03/06/12

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system</b> <sup>20</sup>			
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											Genuine Windows® 7 Professional 64 <b>Preloaded applications</b> <sup>14</sup> (only some listed)			
Implementation	Processor in LGA1155 socket											<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black														
Mouse	<i>Some:</i> Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul> <i>Model(s) with Non multi-touch, Monitor stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 8.4" D X 17.0" H</li> <li>• 507mm W X 213mm D X 431mm H (including stand)</li> <li>• 20.0 lb (9.1 kg) in maximum configuration</li> <li>• Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°</li> <li>• Support VESA mount (100mm)</li> </ul>														
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service</b> <sup>24</sup> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> </ul> EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information  
 US models announced February 21 or March 6, 2012  
 US models withdrawn effective November 2012 or February 2013

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# ThinkCentre® M71z (1782) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>6</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global	Win7 preload
1782-C1U	G620	2GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64
1782-C2U	G840	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-C3U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-C4U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Serial	None	None	USB	None	Pro 64
1782-H2U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These models have a 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>										<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64				
Processor	<b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										<b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>				
Implementation	Processor in LGA1155 socket														
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i>										<b>EPEAT™ Gold rating</b> Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant				
	<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>										Supports ThinkVantage Technologies  For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet				
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

See footnotes for important warranty information  
 US models announced August 9 or December 6, 2011  
 US models withdrawn effective July or November 2012

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 (MTGB1-2) November 2012

# ThinkCentre® M71z (1782) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intr switch	Serial port	PS/2 port	Stand type	Keyboard /Mouse	Win7 Global preload	Ann date (mm/dd/yy)	
1782-K3U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Frame	USB	None	Pro 64	02/21/12
1782-K4U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	02/21/12
1782-F1U	i3-2120	4GBx1	20.0" HD+	2.0M	320G 7200	Intel HD	11b/g/n	None	None	Serial	None	Monitor	USB	None	Pro 64	02/21/12

- Best space saving solution & excellent cable management
- These models have a 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64			
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller											<b>Preloaded applications<sup>14</sup></b> (only some listed)			
Implementation	Processor in LGA1155 socket											<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	None														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<p><i>Model(s) with Non multi-touch, Frame stand:</i></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul> <p><i>Model(s) with Non multi-touch, Monitor stand:</i></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 8.4" D X 17.0" H</li> <li>• 507mm W X 213mm D X 431mm H (including stand)</li> <li>• 20.0 lb (9.1 kg) in maximum configuration</li> <li>• Tilt: 25° back, -5° forward; Lift: 110mm; Swivel: +/-45°</li> <li>• Support VESA mount (100mm)</li> </ul>											<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> </ul> <p>EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

See footnotes for important warranty information  
US models announced February 21, 2012  
US models withdrawn effective November 2012

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(MTGB1-12) November 2012

# ThinkCentre® M71z (1962) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global (G) GMP (P)	Win7 preload
1962-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64
1962-E5U	i5-2400S	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64
1962-F1U	i3-2120	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64

- Best space saving solution & excellent cable management
- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows <sup>®</sup> 7 Professional 64		
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											<b>Preloaded applications<sup>14</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>		
Implementation	Processor in LGA1155 socket													
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX <sup>®</sup> 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>													
DP dongle	None													
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio													
Multi-touch	None													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off													
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off													
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	8-in-1 Single Slot SD media reader													
Chipset	<b>Intel H61 Express Chipset</b>													
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express <sup>®</sup> Mini Card slot													
PCIe WLAN <sup>†</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom <sup>®</sup> BCM43227, 2x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Realtek <sup>®</sup> RTL8111E-VB													
Audio	High Definition (HD) Audio, Realtek ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> MicroSaver<sup>®</sup> cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo													
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	<i>Model(s) with Non multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.0" D X 16.2" H</li> <li>• 507mm W X 101mm D X 411mm H (including stand)</li> <li>• 16.4 lb (7.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>											EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR <sup>®</sup> 5.2-compliant TCO Certified Edge GREENGUARD <sup>®</sup> certified RoHS-compliant Supports ThinkVantage Technologies		
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced September 27, 2011 or February 21, 2012  
 US models withdrawn effective November 2012

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# ThinkCentre® M71z (1654) - Multi-touch (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse Global	Win7 preload
1654-A2U	G530	2GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	None	None	Serial	None	None	USB	None Pro 64

- Best space saving solution & excellent cable management
- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 1-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) • Corel WinDVD® (DVD±RW)
Processor	<b>Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller											
Implementation	Processor in LGA1155 socket											
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>											
DP dongle	None											
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio											
Multi-touch	Supports Multi-touch function											
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off											
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off											
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm											
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel H61 Express Chipset</b>											
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector											
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
PCIe Mini Card	One PCI Express® Mini Card slot											
PCIe WLAN <sup>4</sup>	None											
Bluetooth™	None											
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB											
Audio	High Definition (HD) Audio, Realtek ALC269Q											
Speaker	Two internal stereo speakers (2x2w) with amplifier											
Intel AMT	None											
Modem	None											
IEEE 1394	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo											
Power supply	150 watts, autosensing, 85% PSU											
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.2" D X 16.2" H</li> <li>• 507mm W X 107mm D X 411mm H (including stand)</li> <li>• 19.5 lb (8.9 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>											
Limited Warranty <sup>12</sup>	<b>1-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											
												<b>Security</b> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Chassis intrusion switch EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information  
 US model announced September 20, 2011  
 US model withdrawn effective November 2012

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 (MTGB1-7) November 2012

# ThinkCentre® M71z (1664) - Multi-touch (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>6</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intr switch	Serial port	PS/2 port	Keyboard /Mouse Global	Win7 preload
1664-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Switch	Serial	None	USB	None Pro 64
1664-A3U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None Pro 64
1664-A4U	i5-2500S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None Pro 64
1664-A5U	i7-2600S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None Pro 64
1664-A6U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None Pro 64
1664-A7U	i5-2500S	4GBx1	20.0" HD+	2.0M	320G 7200	DVD±RW	Intel HD	11b/g/n	Media	Switch	Serial	None	USB	None Pro 64
1664-A9U	i5-2400S	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	None	None	Serial	None	USB	None Pro 64

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>										<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64 <b>Preloaded applications</b> <sup>14</sup> (only some listed)			
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Implementation	Processor in LGA1155 socket													
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>													
DP dongle	None													
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off													
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off													
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	<i>Some:</i> 8-in-1 Single Slot SD media reader													
Chipset	<b>Intel H61 Express Chipset</b>													
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB										<b>Security</b>			
Audio	High Definition (HD) Audio, Realtek ALC269Q										<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>			
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.2" D X 16.2" H</li> <li>• 507mm W X 107mm D X 411mm H (including stand)</li> <li>• 19.5 lb (8.9 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>										EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service</b> <sup>24</sup> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available										For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information  
 US models announced August 9, August 23, November 8, or December 13, 2011  
 US models withdrawn effective November 2012

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 (MTGB1-3) November 2012

# ThinkCentre® M71z (1664) - Multi-touch (TopSeller) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Chassis intr switch	Serial port	PS/2 port	Keyboard /Mouse	Win7 Global preload	Ann date (mm/dd/yy)
1664-B1U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	Serial	None	2.4G	None	Pro 64 02/21/12
1664-B2U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	Serial	None	2.4G	None	Pro 64 02/21/12

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system</b> <sup>20</sup> Genuine Windows® 7 Professional 64 <b>Preloaded applications</b> <sup>14</sup> (only some listed)			
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>			
Implementation	Processor in LGA1155 socket														
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	Supports Multi-touch function														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black														
Mouse	Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.2" D X 16.2" H</li> <li>• 507mm W X 107mm D X 411mm H (including stand)</li> <li>• 19.5 lb (8.9 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> </ul>			
												EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant			
												Supports ThinkVantage Technologies			
												For compatible accessories, please go to O-M71Z sheet;			
												For Lenovo service upgrade options, please go to S-TC sheet			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service</b> <sup>24</sup> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

See footnotes for important warranty information  
 US models announced February 21, 2012  
 US models withdrawn effective November 2012 or January 2013

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 (MTGB1-11) February 2013

# ThinkCentre® M71z (1677) - Multi-touch - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (megapixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card	Media reader	Chassis intr switch	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Win7 Global preload	
1677-A1U	i3-2100	2GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Switch	None	None	None	USB	None	Pro 32
1677-B6U	i5-2400S	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	None	Switch	Serial	None	None	USB	None	Pro 64
1677-F1U	i3-2120	4GBx1	20.0" HD+	2.0M	500G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	Serial	None	None	USB	None	Pro 64

- Best space saving solution & excellent cable management
- These models have a 3-year limited warranty
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64			
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											<b>Preloaded applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • ThinkVantage® System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft® Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW) • Corel WinDVD® (DVD±RW)			
Implementation	Processor in LGA1155 socket														
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)														
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>														
DP dongle	None														
Display	<b>20.0"</b> (508mm) <b>HD+ (1600x900) TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio														
Multi-touch	Supports Multi-touch function														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off														
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off														
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm														
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable														
eSATA port	None														
Media reader	Some: 8-in-1 Single Slot SD media reader														
Chipset	<b>Intel H61 Express Chipset</b>														
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector														
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express® Mini Card slot														
PCIe WLAN <sup>†</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB														
Audio	High Definition (HD) Audio, Realtek ALC269Q														
Speaker	Two internal stereo speakers (2x2w) with amplifier														
Intel AMT	None														
Modem	None														
IEEE 1394	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											<b>Security</b> • Security chip (see information on left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard and mouse • USB port disablement • Some: Chassis intrusion switch			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU														
Machine	<i>Model(s) with multi-touch, Frame stand:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 20.0" W X 4.2" D X 16.2" H</li> <li>• 507mm W X 107mm D X 411mm H (including stand)</li> <li>• 19.5 lb (8.9 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>											EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet														

See footnotes for important warranty information  
 US models announced August 9, 2011, or February 21, 2012  
 US models withdrawn effective November 2012

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 (MTGB1-4) November 2012



# ThinkCentre® M71z (1938) - Multi-touch (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>6</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Serial port	PS/2 port	Display-Port dongle	Keyboard /Mouse	Global (G) GMP (P)	Win7 preload
1938-A1U	i3-2100	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64
1938-A4U	i5-2400S	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64
1938-B1U	i3-2120	4GBx1	20.0" HD+	2.0M	250G 7200	DVD±RW	Intel HD	11b/g/n	Media	None	None	None	USB	G P	Pro 64

- Best space saving solution & excellent cable management
- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>All-In-One PC for the enterprise</i>											<b>Preloaded operating system<sup>20</sup></b> Genuine Windows <sup>®</sup> 7 Professional 64		
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											<b>Preloaded applications<sup>14</sup></b> (only some listed) ● Rescue and Recovery™ ● ThinkVantage® System Update ● ThinkVantage Power Manager ● ThinkVantage Toolbox ● Norton™ Internet Security 2011 (30 days of virus definitions) ● Adobe® Reader® ● Skype™ for Windows ● Microsoft® Office 2010 preloaded; purchase product key to activate ● Corel® Burn.Now™ (DVD±RW) ● Corel DVD MovieFactory® (DVD±RW) ● Corel WinDVD® (DVD±RW)		
Implementation	Processor in LGA1155 socket													
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via DisplayPort™, supports dual independent display; <i>Maximum resolution: 1920x1080 (DisplayPort)@60Hz</i>													
DP dongle	None													
Display	<b>20.0"</b> (508mm) <b>HD+</b> ( <b>1600x900</b> ) <b>TFT color</b> , CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, physical switch on/off													
Controls	Front facing buttons for brightness up/auto, brightness down, and power on/off													
Disk	SATA 3.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	8-in-1 Single Slot SD media reader													
Chipset	<b>Intel H61 Express Chipset</b>													
Rear ports	Four USB 2.0, optional serial (9-pin), ethernet (RJ-45), DisplayPort connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express® Mini Card slot													
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Broadcom® BCM43227, 2x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Realtek® RTL8111E-VB													
Audio	High Definition (HD) Audio, Realtek ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											<b>Security</b> ● Security chip (see information on left) ● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) ● Boot sequence control ● Boot without keyboard and mouse ● USB port disablement ● Chassis intrusion switch		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	<i>Model(s) with multi-touch, Frame stand:</i> ● Business black color ● 20.0" W X 4.2" D X 16.2" H ● 507mm W X 107mm D X 411mm H (including stand) ● 19.5 lb (8.9 kg) in maximum configuration ● Handle in rear ● Support VESA mount (100mm) ● Removable feet											EPEAT™ Gold rating Climate Saver-compliant ENERGY STAR® 5.2-compliant TCO Certified Edge GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available											For compatible accessories, please go to O-M71Z sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information

US models announced September 27, 2011 or February 21, 2012

US models withdrawn effective November 2012

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**Memory**

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 <sup>52</sup>	57Y6336	ann 12/08/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Stand**

ThinkCentre Extend Arm	57Y4352	ann 07/06/10
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**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) <sup>68</sup>	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) <sup>68</sup>	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann 09/13/11

<sup>68</sup> Requires a DisplayPort Monitor Cable (DisplayPort to Single-Link DVI-D or DisplayPort to VGA Analog).

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M75e Small and  
Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M75e Small



Lenovo ThinkCentre M75e Small  
with Lenovo ThinkVision monitor




Lenovo ThinkCentre M75e Tower



Lenovo ThinkCentre M75e Tower

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
4163-B2U	4x3	Sempron 145	2.80	1GB	250GB <sup>2</sup>	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 1-year limited warranty<sup>1</sup>**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Sempron™ Processor 145</b> with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache Processor in Socket AM3		<b>Small</b>	
Implementation	Processor in Socket AM3			
Memory	<b>1GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed  Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3  • Business black color; metal case • 13.2" W X 15.0" D X 3.9" H • 335mm W X 382mm D X 99mm H • 14.9 lb (6.8 kg) in maximum configuration • Highlighted optical drive button for easy access • System floor stand for vertical orientation	
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz			
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710			
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Modem	None			
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	240 watts, autosensing, active Power Factor Correction			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® 7 Home Premium 32	2GB PC3-10600 DDR3 UDIMM	57Y4390		
	DisplayPort™ to Single-link DVI-D Cable	45J7915		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397		
• Rescue and Recovery™	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167		
• ThinkVantage System Update	More accessories on O-M75E sheet			
• ThinkVantage Power Manager	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• ThinkVantage Toolbox	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Norton™ Internet Security 2011 (30 days of virus definitions)				
• Adobe® Reader®				
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				


See footnotes for important warranty information  
 US model announced September 28, 2010  
 US model withdrawn effective January 2012

# ThinkCentre® M75e Small (5042) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5042-A5U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A9U	4x3	Athlon II X2 B24	3.00	2GB	320GB	DVD±RW	Media	3000	VGA, DVI-D	Pro 64	None	Jun 11
5042-A6U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5042-A7U	4x3	Athlon II X4 640	3.00	4GB	500GB	DVD±RW		3000	VGA, DVI-D	Pro 64	None	Oct 10

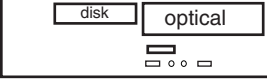
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	Essential business features, exceptional value <b>AMD® Athlon™ II X2 Processor B22</b> or <b>B24</b> with <b>dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Phenom™ II X2 Processor B53</b> with <b>dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or <b>AMD Athlon™ II X4 Processor 640</b> with <b>quad-core</b> , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed	
Memory	<b>2GB, 3GB, or 4GB std, 16GB max<sup>8</sup>, UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3	
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk SATA controller SATA DVD±RW SATA cables eSATA port Diskette drive Media reader	<b>320GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in SB710 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar None None <i>Some:</i> Single Slot SD Media Card Reader		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		
Front ports Rear ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports Internal connector Audio Speaker IEEE 1394 Ethernet Modem Security chip	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm) Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports) High Definition (HD) Audio, Realtek® ALC662 codec One internal speaker for business audio None Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN® None Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo 240 watts, autosensing, active Power Factor Correction		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64	2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™ • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel® Burn.Now™ (DVD±RW) • Corel DVD MovieFactory® (DVD±RW)			
		<b>Security</b>	
		<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>	
		Supports ThinkVantage® technologies	
		GREENGUARD® certified RoHS-compliant	
		<b>Limited Warranty<sup>1</sup></b>	
		<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
US models announced September 21, 2010 or May 24, 2011  
US models withdrawn effective November 2011 or January 2012

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5046-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10

- **This model has a 1-year limited warranty<sup>1</sup>**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Athlon™ II X2 Processor B22</b> with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)		<b>Small</b>	
Implementation	Processor in Socket AM3			
Memory	<b>2GBstd</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3	
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar			
eSATA port	None			
Diskette drive	None		Supports ThinkVantage® technologies	
Media reader	None			
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		GREENGUARD® certified RoHS-compliant	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Modem	None			
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	240 watts, autosensing, active Power Factor Correction			
<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 32			See footnotes for important warranty information US model announced September 21, 2010 US model withdrawn effective November 2011	
<b>Preloaded applications<sup>5</sup> (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
<b>Accessories</b> <ul style="list-style-type: none"> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>DisplayPort™ to Single-link DVI-D Cable 45J7915</li> <li>NVIDIA® Quadro® 512MB FX 380 LP 57Y4396</li> <li>NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397</li> <li>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167</li> <li>More accessories on O-M75E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>				


See footnotes for important warranty information  
 US model announced September 21, 2010  
 US model withdrawn effective November 2011

# ThinkCentre® M75e Small (5054) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5054-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5054-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5054-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	DVD±RW	None	3000	VGA, DVI-D	Pro 64	None	Oct 10


- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Athlon™ II X2 Processor B22 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Phenom™ II X2 Processor B53 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or <b>AMD Athlon™ II X4 Processor 640 with quad-core</b> , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3	
Memory	<b>2GB, 3GB, or 4GB std.</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz	<b>Security</b>	<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O co</li> <li>• USB port disablement</li> </ul>
SATA disk SATA controller SATA DVD±RW SATA cables eSATA port Diskette drive Media reader	<b>320GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in SB710 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar None None None		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		
Front ports Rear ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports Internal connector Audio Speaker IEEE 1394 Ethernet Modem Security chip	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm) Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports) High Definition (HD) Audio, Realtek® ALC662 codec One internal speaker for business audio None Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN® None Winbond® WPC2T10 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	Supports ThinkVantage® technologies	
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo 240 watts, autosensing, active Power Factor Correction	GREENGUARD® certified RoHS-compliant	
<b>Preloaded operating system<sup>20</sup></b> - <i>Some:</i> Genuine Windows® 7 Professional 32 - <i>Some:</i> Genuine Windows 7 Professional 64	<b>Accessories</b> 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<b>Limited Warranty<sup>1</sup></b>	<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
US models announced September 21, 2010  
US models withdrawn effective November 2011 or January 2012

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5062-A2U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5062-A3U	4x3	Phenom II X2 B53	2.80	3GB	320GB	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Athlon™ II X2 Processor B22</b> with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed
Implementation		
Memory	<b>2GB or 3GB std.</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz	<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Modem	None	
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	240 watts, autosensing, 85% PSU	
<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32</li> </ul> <p><b>Preloaded applications<sup>5</sup> (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>DisplayPort™ to Single-link DVI-D Cable 45J7915</li> <li>NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397</li> <li>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167</li> <li>More accessories on O-M75E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		

See footnotes for important warranty information  
US models announced September 21, 2010  
US models withdrawn effective November 2011 or January 2012




# ThinkCentre® M75e Small (5058) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5058-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB <sup>2</sup>	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3	<b>Small</b> 
Implementation		
Memory	<b>2GB std, 16GB max<sup>8</sup>, UDIMM, PC3-10600 1333MHz DDR3<sup>3</sup>*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Modem	None	
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	240 watts, autosensing, active Power Factor Correction	GREENGUARD® certified RoHS-compliant
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
- Genuine Windows® 7 Professional 32	2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>		
• Rescue and Recovery™		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• ThinkVantage Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Corel® Burn.Now™ (DVD±RW)		
• Corel DVD MovieFactory® (DVD±RW)		


See footnotes for important warranty information  
US model announced October 12, 2010  
US model withdrawn effective January 2012

# ThinkCentre® M75e Small (5064) - ES 5.0 (GMP) - Win 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>6</sup>	SATA disk	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5064-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB <sup>2</sup>	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3	<b>Small</b> 
Implementation		
Memory	<b>2GB std, 16GB max<sup>8</sup>, UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 1.5", .35" high, access, opt reader* * bay only available on models with media reader installed Slot 1: Low Profile, PCIe 2.0 x16 (40w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution</i> : 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.2" W X 15.0" D X 3.9" H</li> <li>• 335mm W X 382mm D X 99mm H</li> <li>• 14.9 lb (6.8 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA disk SATA controller SATA DVD±RW SATA cables eSATA port Diskette drive Media reader	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in SB710 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar None None None	<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	
Front ports Rear ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	Supports ThinkVantage® technologies
Rear audio ports Internal connector Audio Speaker IEEE 1394 Ethernet Modem Security chip	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm) Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports) High Definition (HD) Audio, Realtek® ALC662 codec One internal speaker for business audio None Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN® None Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard Mouse Power supply	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo 240 watts, autosensing, 85% PSU	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 32	<b>Accessories</b> 2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

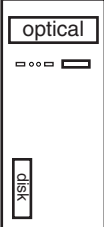
See footnotes for important warranty information  
US model announced October 12, 2010  
US model withdrawn effective January 2012

# ThinkCentre® M75e Tower (4162) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
4162-A3U	4x3	Sempron 145	2.80	1GB	250GB <sup>b</sup>	None	DVD	None	3000	VGA, DVI-D	Prem 32	None	Oct 10

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 1-year limited warranty<sup>1</sup>**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Sempron™ Processor 145</b> with single-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 									
Implementation	Processor in Socket AM3											
Memory	<b>1GB std, 16GB max<sup>8</sup>, UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller											
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 1920x1200 (DVI-D)@60Hz											
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed</p> <p>Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3</p>									
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710											
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16-48X Max* Drive											
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors											
eSATA port	None											
Diskette drive	None											
Media reader	None											
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®											
Modem	None											
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>									
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch		Supports ThinkVantage® technologies									
<p><b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Home Premium 32</p> <p><b>Preloaded applications<sup>5</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> </ul>			<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>									
<p><b>Accessories</b></p> <table border="0"> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td> <td>41N5618</td> </tr> <tr> <td>DisplayPort™ to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td> <td>57Y4397</td> </tr> <tr> <td>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)</td> <td>57Y4167</td> </tr> </table> <p>More accessories on O-M75E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>				2GB PC3-10600 DDR3 UDIMM	57Y4390	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	DisplayPort™ to Single-link DVI-D Cable	45J7915	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)
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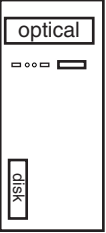
See footnotes for important warranty information  
US model announced September 28, 2010  
US model withdrawn effective January 2012

# ThinkCentre® M75e Tower (5041) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5041-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5041-A6U	4x3	Athlon II X2 B24	3.00	2GB	320GB	None	DVD±RW	Media	3000	VGA, DVI-D	Pro 64	None	Jun 11
5041-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW		3000	VGA, DVI-D	Pro 32	None	Oct 10
5041-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	None	DVD±RW		3000	VGA, DVI-D	Pro 64	None	Oct 10

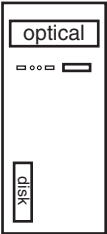
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Essential business features, exceptional value</i>  <b>AMD® Athlon™ II X2 Processor B22 or B24 with dual-core</b>, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or  <b>AMD Phenom™ II X2 Processor B53 with dual-core</b>, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or  <b>AMD Athlon II X4 Processor 640 with quad-core</b>, integrated 1333 MHz DDR3 memory controller, and 2MB L2 cache (512KB per core)                      Processor in Socket AM3</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>									
Implementation	Processor in Socket AM3	<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 1.5", .35" high, access, opt reader*                      Bay ③ 3.5", 1" high, no access, std disk                      * bay only available on models with media reader installed</p>									
Memory	<p><b>2GB, 3GB, or 4GB std</b>, 16GB max<sup>8</sup>, <b>UDIMM, PC3-10600 1333MHz DDR3*</b>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets avail;  <i>Non-italics:</i> standard memory in one socket; three sockets avail                      * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>	<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, PCIe 2.0 x1                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>									
Graphics	<p><b>ATI™ Radeon™ 3000</b>, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter;  <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>									
SATA disk	<p><b>320GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710										
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar										
eSATA port	None										
Diskette drive	None										
Media reader	<i>Some:</i> Single Slot SD Media Card Reader										
Chipset	<p><b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O</p>										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	One internal speaker for business audio										
IEEE 1394	None										
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®										
Modem	None										
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, manual switch										
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some:</i> Genuine Windows® 7 Professional 32                      - <i>Some:</i> Genuine Windows 7 Professional 64</p>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>DisplayPort™ to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td> <td>57Y4397</td> </tr> <tr> <td>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)</td> <td>57Y4167</td> </tr> </table> <p>More accessories on O-M75E sheet</p>	2GB PC3-10600 DDR3 UDIMM	57Y4390	DisplayPort™ to Single-link DVI-D Cable	45J7915	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167	
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NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167										
<b>Preloaded applications<sup>5</sup></b> (all OSEs; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>									
		<p>Supports ThinkVantage® technologies</p>									
		<p>GREENGUARD® certified                      RoHS-compliant</p>									
		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>									

See footnotes for important warranty information  
 US models announced September 21, 2010 or May 24, 2011  
 US models withdrawn effective November 2011 or January 2012

# ThinkCentre® M75e Tower (5044) - Windows 7 - withdrawn

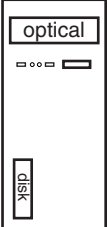
Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5044-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
<ul style="list-style-type: none"> <li>• <b>This model has a 1-year limited warranty<sup>1</sup></b></li> <li>• <b>This system is Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>													
Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Athlon™ II X2 Processor B22</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) Processor in Socket AM3							<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul>					
Implementation	Processor in Socket AM3							Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed					
Memory	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller							Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3					
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter												
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB710 SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors on planar eSATA port None Diskette drive None Media reader None										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O										Supports ThinkVantage® technologies		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	One internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®												
Modem	None												
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										GREENGUARD® certified		
Power supply	280 watts with variable speed fan, manual switch										RoHS-compliant		
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>											
- Genuine Windows® 7 Professional 32		2GB PC3-10600 DDR3 UDIMM		57Y4390									
• Rescue and Recovery™		DisplayPort™ to Single-link DVI-D Cable		45J7915									
• ThinkVantage System Update		NVIDIA® GeForce® 310 512MB (DP, VGA)		57Y4397									
• ThinkVantage Power Manager		NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)		57Y4167									
• ThinkVantage Toolbox		More accessories on O-M75E sheet											
• Norton™ Internet Security 2011 (30 days of virus definitions)		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>											
• Adobe® Reader®		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>											
• Skype™ for Windows													
• Microsoft Office 2010 preloaded; purchase product key to activate													
• Corel® Burn.Now™ (DVD±RW)													
• Corel DVD MovieFactory® (DVD±RW)													
<b>Limited Warranty<sup>1</sup></b>													
<ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>													

See footnotes for important warranty information  
 US model announced September 21, 2010  
 US model withdrawn effective on November 2011

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5053-A1U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5053-A2U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5053-A3U	4x3	Athlon II X4 640	3.00	4GB	500GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 64	None	Oct 10

- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Essential business features, exceptional value <b>AMD® Athlon™ II X2 Processor B22</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache or <b>AMD Athlon II X4 Processor 640</b> with quad-core, integrated 1333 MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) Processor in Socket AM3	<b>Tower</b> • Business black color; metal case • 6.3" W X 16.6" D X 15.3" H • 160mm W X 422mm D X 388mm H • 21.2 lb (9.6 kg) in max configuration • Handle on top front • Highlighted optical drive button for easy access	
Implementation			
Memory	<b>2GB, 3GB, or 4GB std</b> , 16GB max <sup>a</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed	
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @ 75Hz; 1920x1200 (DVI-D) @ 60Hz	Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>320GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<b>Security</b> • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse • Serial port I/O control • USB port disablement
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		Supports ThinkVantage® technologies
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		GREENGUARD® certified RoHS-compliant
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Modem	None		
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32	s2GB PC3-10600 DDR3 UDIMM 57Y4390		
- <i>Some:</i> Genuine Windows 7 Professional 64	DisplayPort™ to Single-link DVI-D Cable 45J7915		
	NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397		
	NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167		
	More accessories on O-M75E sheet		
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b> (all OSEs; only some listed)			
• Rescue and Recovery™			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

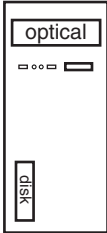
See footnotes for important warranty information  
US models announced September 21, 2010  
US models withdrawn effective November 2011 or January 2012

# ThinkCentre® M75e Tower (5061) - ES 5.0 (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global Educ	Avail date
5061-A4U	4x3	Athlon II X2 B22	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10
5061-A5U	4x3	Phenom II X2 B53	2.80	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	None	Oct 10

- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Athlon™ II X2 Processor B22</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation	<b>2GB or 3GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		
Memory	<b>2GB or 3GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets avail; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <b>Maximum resolution: 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz</b>		Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB710 SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors on planar eSATA port None Diskette drive None Media reader None		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		Supports ThinkVantage® technologies
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		EPEAT™ Gold rating ENERGY STAR 5.0-compliant GREENGUARD® certified RoHS-compliant
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Speaker	None		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Modem	None		
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <ul style="list-style-type: none"> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>DisplayPort™ to Single-link DVI-D Cable 45J7915</li> <li>NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397</li> <li>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167</li> <li>More accessories on O-M75E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

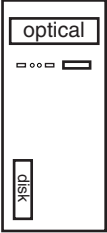
See footnotes for important warranty information  
 US models announced September 21, 2010  
 US models withdrawn effective November 2011 or January 2012

# ThinkCentre® M75e Tower (5057) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5057-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		
Memory	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in SB710 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
SATA disk	None None None		
SATA controller	None None None		Supports ThinkVantage® technologies
SATA DVD±RW	None None None		
SATA cables	None None None		<b>GREENGUARD® certified</b> RoHS-compliant
eSATA port	None None None		
Diskette drive	None None None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Media reader	None None None		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		Supports ThinkVantage® technologies
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		<b>GREENGUARD® certified</b> RoHS-compliant
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Modem	None		
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
- Genuine Windows® 7 Professional 32	2GB PC3-10600 DDR3 UDIMM 57Y4390 DisplayPort™ to Single-link DVI-D Cable 45J7915 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167 More accessories on O-M75E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Rescue and Recovery™ ThinkVantage System Update ThinkVantage Power Manager ThinkVantage Toolbox Norton™ Internet Security 2011 (30 days of virus definitions) Adobe® Reader® Skype™ for Windows Microsoft Office 2010 preloaded; purchase product key to activate Corel® Burn.Now™ (DVD±RW) Corel DVD MovieFactory® (DVD±RW)		

See footnotes for important warranty information  
 US model announced October 12, 2010  
 US model withdrawn effective January 2012

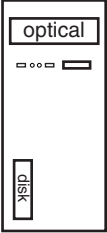


# ThinkCentre® M75e Tower (5063) - ES 5.0 (GMP) - Win 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Win7 preload	Global (G) GMP (P)	Avail date
5063-A1U	4x3	Phenom II X2 B53	2.80	2GB	320GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Pro 32	G P	Nov 10

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Essential business features, exceptional value</i> <b>AMD® Phenom™ II X2 Processor B53</b> with dual-core, integrated 1066 MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.3" W X 16.6" D X 15.3" H</li> <li>• 160mm W X 422mm D X 388mm H</li> <li>• 21.2 lb (9.6 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Highlighted optical drive button for easy access</li> </ul> 
Implementation	<b>2GB std</b> , 16GB max <sup>8</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets avail * System automatically clocks down for processors with 1066MHz DDR3 memory controller		
Memory	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA) @75Hz; 1920x1200 (DVI-D) @60Hz		Bay ① 5.25", 1.6" high, access, std optical Bay ② 1.5", .35" high, access, opt reader* Bay ③ 3.5", 1" high, no access, std disk * bay only available on models with media reader installed Slot 1: half-length, full-height, PCIe 2.0 x16 (60w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3
Graphics	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts Serial ATA, SATA 3.0Gb/s, integrated in SB710 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Two SATA cables (each 1-drop to device), four SATA connectors on planar		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul>
SATA disk	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
SATA controller	None		Supports ThinkVantage® technologies
SATA DVD±RW	None		
SATA cables	None		EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
eSATA port	None		
Diskette drive	None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Media reader	None		
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Modem	None		
Security chip	Winbond® WPCT210 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <ul style="list-style-type: none"> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>DisplayPort™ to Single-link DVI-D Cable 45J7915</li> <li>NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397</li> <li>NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA) 57Y4167</li> <li>More accessories on O-M75E sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

See footnotes for important warranty information  
 US model announced October 12, 2010  
 US model withdrawn effective January 2012

**Memory**

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Graphics**

*Small 4163/5042/5046/5054/5062/5058/5064 support Low Profile:*

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable <sup>50</sup>	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable <sup>50</sup>	0A36537	ann 09/13/11
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

*Tower 4162/5041/5044/5053/5061/5057/5063 support:*

DisplayPort to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable <sup>50</sup>	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable <sup>50</sup>	0A36537	ann 09/13/11
NVIDIA GeForce 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphic card.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad® USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic <sup>60</sup>	57Y4488	ann 01/07/10
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<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Modem**

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann 09/13/11

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M77  
Small and Tower



Lenovo ThinkCentre M77 Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M77 Small



Lenovo ThinkCentre M77 Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M77 Tower



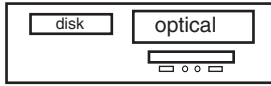
Lenovo ThinkCentre M77 Tower

# ThinkCentre® M77 Small (2272) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
2227-A1U	4x3	Athlon II X4 645	3.1	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A2U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A3U	4x3	Phenom II X2 B53	2.8	4GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A4U	4x3	FX 4100	3.6	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A5U	4x3	Athlon II X2 B26	3.2	2GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-A6U	4x3	Phenom II X2 B53	2.8	4GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-B1U	4x3	Phenom II X2 B57	3.2	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2227-C1U	4x3	Phenom II X2 B57	3.2	2GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64

- Small and medium business (SMB) model(s), part of the US TopSeller Program
- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications</b> (only some listed) <ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Windows Live™ Essentials</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>AMD Athlon™ II X2 Processor B24 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Athlon II X2 Processor B26 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B53 with dual-core</b> , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache <b>AMD Phenom II X2 Processor B57 with dual-core</b> , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache <b>AMD Athlon II X4 Processor 645 with quad-core</b> , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) <b>AMD FX™ Processor 4100 with quad-core</b> , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache		
Implementation	Processor in Socket AM3+		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz</i> None		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>AMD 980G Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, active Power Factor Correction		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
			
	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>		
	RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information

US models announced Sep 20, Nov 8, Dec 13, 2011, Feb 21, or Mar 6, 2012

US models withdrawn effective November 2012 or May 2013

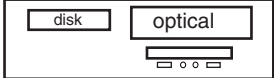
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# ThinkCentre® M77 Small (2209) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
2209-A4U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2209-B3U	4x3	Athlon II X4 645	3.1	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2209-D5U	4x3	Sempron 150	2.9	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	Switch	None	Stand	None	N N	Pro 64
2209-E1U	4x3	Athlon II X2 B26	3.2	4GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64
2209-G1U	4x3	Athlon II X2 220	2.8	2GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	None	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<p><b>AMD Sempron™ Processor 150</b> with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache</p> <p><b>AMD Athlon™ II X2 processor 220</b> with <b>dual-core</b>, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core)</p> <p><b>AMD Athlon™ II X2 Processor B24</b> with <b>dual-core</b>, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)</p> <p><b>AMD Athlon™ II X2 Processor B26</b> with <b>dual-core</b>, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)</p> <p><b>AMD Athlon™ II X4 Processor 645</b> with <b>quad-core</b>, integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core)</p>										Genuine Windows® 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>● ThinkVantage® Product Recovery</li> <li>● ThinkVantage System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Windows Live™ Essentials</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<p><b>ATI™ Radeon™ HD 4250</b>, integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz</i></p>														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Floor Stand	System floor stand for vertical orientation														
Power supply	240 watts, autosensing, active Power Factor Correction														
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>														
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 3.5", 1" high, no access, std disk</p> <p>Bay 3: 3.5", .5" high, access, opt reader</p>														
Slot	<p>Slot 1: Low Profile, PCI Express 2.0 x16 (45w max)</p> <p>Slot 2: Low Profile, PCIe 2.0 x1</p> <p>Slot 3: Low Profile, PCIe 2.0 x1</p> <p>Slot 4: Low Profile, 32-bit PCI 2.3</p>														
Limited Warranty	<p><b>3-years, limited onsite service</b>, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> <li>● <i>Some:</i> Chassis intrusion switch</li> </ul> <p>RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>				

See footnotes for important warranty information  
 US models announced Sep 20, 2011, Nov 8, 2011, Jan 24, 2012, or June 5, 2012  
 US models withdrawn effective November 2012 or May 2013

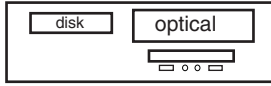
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 (ABNY1-2) May 2013

# ThinkCentre® M77 Small (1996) - ES 5.2 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global Educ	Win7 preload
1996-A2U	4x3	Athlon II X2 B24	3.0	2GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-A3U	4x3	Phenom II X2 B53	2.8	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-D7U	4x3	FX 4100	3.6	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-E1U	4x3	Athlon II X2 B26	3.2	4GBx1	250G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-E2U	4x3	Athlon II X2 B26	3.2	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64
1996-G1U	4x3	Phenom II X2 B57	3.2	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>		<p><b>Preloaded operating system</b></p> <p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications</b> (only some listed)</p> <ul style="list-style-type: none"> <li>● ThinkVantage® Product Recovery</li> <li>● ThinkVantage System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Windows Live™ Essentials</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>AMD Athlon™ II X2 Processor B24 with dual-core</b>, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)</p> <p><b>AMD Athlon II X2 Processor B26 with dual-core</b>, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core)</p> <p><b>AMD Phenom™ II X2 Processor B53 with dual-core</b>, integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache</p> <p><b>AMD Phenom II X2 Processor B57 with dual-core</b>, integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache</p> <p><b>AMD FX™ Processor 4100 with quad-core</b>, Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache</p> <p>Processor in Socket AM3+</p>		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<p><b>ATI™ Radeon™ HD 4250</b>, integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort)@60Hz</i></p> <p>None</p>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>AMD 980G Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>		
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 3.5", 1" high, no access, std disk</p> <p>Bay 3: 3.5", .5" high, access, opt reader</p>		
Slot	<p>Slot 1: Low Profile, PCI Express 2.0 x16 (45w max)</p> <p>Slot 2: Low Profile, PCIe 2.0 x1</p> <p>Slot 3: Low Profile, PCIe 2.0 x1</p> <p>Slot 4: Low Profile, 32-bit PCI 2.3</p>		
Limited Warranty	<p><b>3-years, limited onsite service</b>, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</p>		
			
	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> </ul>		
	<p>EPEAT™ Gold rating</p> <p>ENERGY STAR 5.2-compliant</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p>		
	<p>Supports ThinkVantage Technologies</p>		
	<p>For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>		

See footnotes for important warranty information  
 US models announced Sep 20, 2011, Nov 8, 2011, Jan 24, 2012, or June 5, 2012  
 US models withdrawn effective November 2012 or May 2013

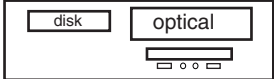
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 (ABNY1-3) May 2013

# ThinkCentre® M77 Small (1997) - ES 5.2 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	Floor stand	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
1997-A1U	4x3	Athlon II X2 B24	3.0	4GBx1	320G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	G P	Pro 32
1997-B1U	4x3	Phenom II X2 B57	3.2	4GBx1	500G 7200	DVD±RW	None	HD 4250	None	None	None	Stand	ES5.2	G P	Pro 64

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<b>AMD Athlon™ II X2 Processor B24</b> with dual-core, integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B57</b> with dual-core, integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache										Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Windows Live™ Essentials</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</i>														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Floor Stand	System floor stand for vertical orientation														
Power supply	240 watts, autosensing, 85% PSU														
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader										<b>Security</b>				
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1 Slot 4: Low Profile, 32-bit PCI 2.3										<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>				
											EPEAT™ Gold rating ENERGY STAR® 5.2-compliant GREENGUARD® certified RoHS-compliant				
											Supports ThinkVantage Technologies				
Limited Warranty	3-years, limited onsite service, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available														
											For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced September 20, 2011 or February 28, 2012  
 US models withdrawn effective November 2012 or May 2013

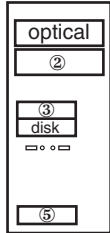
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# ThinkCentre® M77 Tower (1995) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
1995-A1U	4x5	Athlon II X4 645	3.1	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A2U	4x5	Athlon II X2 B24	3.0	2GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A3U	4x5	Phenom II X2 B53	2.8	4GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A4U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1995-A5U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	Switch	None	None	N N	Pro 64
1995-A6U	4x5	Phenom II X2 B53	2.8	4GBx1	500G 7200	Bay	DVD±RW	None	HD 5450	None	Switch	None	None	N N	Pro 64

- Small and medium business (SMB) model(s), part of the US TopSeller Program
- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<b>AMD Athlon™ II X2 Processor B24 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B53 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core)s, and 6MB shared L3 cache <b>AMD Athlon II X4 Processor 645 with quad-core</b> , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core) <b>AMD FX™ Processor 4100 with quad-core</b> , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache										Genuine Windows® 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Windows Live™ Essentials</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<i>Some:</i> <b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one VGA, one DisplayPort™, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution:</i> 2560x1440 (VGA)@75Hz; 2560x1600 (DP)@60Hz <i>Some:</i> <b>AMD Radeon HD 5450</b> , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I)@60Hz														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, manual switch														
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>				
											RoHS-compliant				
											Supports ThinkVantage Technologies				
											For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced September 20 or November 8, 2011  
 US models withdrawn effective November 2012 or May 2013

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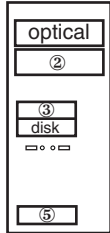


# ThinkCentre® M77 Tower (1995) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk GB	2nd Disk rpm	Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR	Global 5.2 Educ	Win7 preload(mm/dd/yy)	Ann date
1995-A7U	4x5	Athlon II X2 B26	3.2	2GBx1	250G	7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	12/13/11
1995-A9U	4x5	Phenom II X2 B53	2.8	4GBx1	250G	7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	12/13/11
1995-B1U	4x5	Phenom II X2 B57	3.2	4GBx1	500G	7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	02/21/12
1995-C1U	4x5	Athlon II X2 B24	3.0	2GBx1	250G	7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64	03/06/12

- Small and medium business (SMB) model(s), part of the US TopSeller Program
- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>											<b>Preloaded operating system</b>					
Processor	<b>AMD Athlon™ II X2 Processor B24 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Athlon II X2 Processor B26 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B53 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache <b>AMD Phenom II X2 Processor B57 with dual-core</b> , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache											Genuine Windows® 7 Professional 64					
Implementation	Processor in Socket AM3+											<b>Preloaded applications</b> (only some listed)					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Windows Live™ Essentials</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz</i>																
DP dongle	None																
Disk	SATA 6.0Gb/s 7200 rpm																
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1																
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar																
eSATA port	None																
Media reader	None																
Chipset	<b>AMD 980G Chipset</b>																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)																
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																
Speaker	Internal speaker for business audio																
IEEE 1394	None																
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1																
Modem	None																
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo																
Power supply	280 watts with variable speed fan, manual switch																
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)																
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3																
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>					
												RoHS-compliant					
												Supports ThinkVantage Technologies					
												For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced December 13, 2011, February 21, 2012, or March 6, 2012  
 US models withdrawn effective November 2012 or May 2013

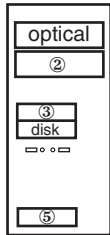
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# ThinkCentre® M77 Tower (1990) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
1990-A6U	4x4	Athlon II X2 B24	3.0	2GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1990-B6U	4x5	Athlon II X4 645	3.1	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1990-E1U	4x5	Sempron 150	2.9	2GBx1	320G 7200	Bay	DVD±RW	None	HD 4250	None	Switch	None	None	N N	Pro 64
1990-F1U	4x4	Athlon II X2 B26	3.2	4GBx1	250G 7200	None	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64
1990-G1U	4x4	Athlon II X2 220	2.8	2GBx1	250G 7200	None	DVD±RW	None	HD 4250	None	None	None	None	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<b>AMD Sempron™ Processor 150</b> with single-core, integrated 1066MHz DDR3 memory controller, and 1MB L2 cache <b>AMD Athlon™ II X2 processor 220</b> with <b>dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core) <b>AMD Athlon II X2 Processor B24</b> with <b>dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Athlon II X2 Processor B26</b> with <b>dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Athlon II X4 Processor 645</b> with <b>quad-core</b> , integrated 1333MHz DDR3 memory controller, and 2MB L2 cache (512KB per core)										Genuine Windows® 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>● ThinkVantage® Product Recovery</li> <li>● ThinkVantage System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Windows Live™ Essentials</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</i>														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, manual switch														
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3										<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> <li>● <i>Some:</i> Chassis intrusion switch</li> </ul>				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										<b>RoHS-compliant</b> <b>Supports ThinkVantage Technologies</b> For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced Sep 20, 2011, Nov 8, 2011, Jan 24, 2012, or June 5, 2012  
 US models withdrawn effective November 2012 or May 2013

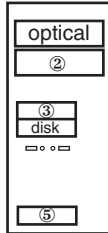
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# ThinkCentre® M77 Tower (1982) - ES 5.2 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global Educ	Win7 preload
1982-A4U	4x4	Athlon II X2 B24	3.0	2GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-A5U	4x4	Phenom II X2 B53	2.8	4GBx1	500G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-E3U	4x5	FX 4100	3.6	4GBx1	500G 7200	Bay	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-F1U	4x4	Athlon II X2 B26	3.2	4GBx1	250G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64
1982-G1U	4x4	Phenom II X2 B57	3.2	4GBx1	500G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	N N	Pro 64

- 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<b>AMD Athlon™ II X2 Processor B24 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Athlon II X2 Processor B26 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B53 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 1MB L2 cache (512KB per core), and 6MB shared L3 cache <b>AMD Phenom II X2 Processor B57 with dual-core</b> , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache <b>AMD FX™ Processor 4100 with quad-core</b> , Turbo Core 2.0 (3.8GHz max) integrated 1866MHz DDR3 memory controller, 4MB L2 cache (1MB per core), and 8MB shared L3 cache										Genuine Windows® 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>● ThinkVantage® Product Recovery</li> <li>● ThinkVantage System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Windows Live™ Essentials</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA)@75Hz; 2560x1600 (DisplayPort)@60Hz</i>														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU														
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> </ul>				
											EPEAT™ Gold rating ENERGY STAR 5.2-compliant GREENGUARD® certified RoHS-compliant				
											Supports ThinkVantage Technologies				
											For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced Sep 20, 2011, Nov 8, 2011, Jan 24, 2012, or June 5, 2012  
 US models withdrawn effective November 2012 or May 2013

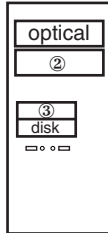
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# ThinkCentre® M77 Tower (1983) - ES 5.2 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Media reader	Graphics	Display-Port dongle	Chassis intr switch	PS/2 port	ENERGY STAR 5.2	Global (G) GMP (P)	Win7 preload
1983-A1U	4x4	Athlon II X2 B24	3.0	4GBx1	320G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	G P	Pro 32
1983-B1U	4x4	Phenom II X2 B57	3.2	4GBx1	500G 7200	None	DVD±RW	None	HD 4250	None	None	None	ES5.2	G P	Pro 64

- Part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Preloaded operating system</b>				
Processor	<b>AMD Athlon™ II X2 Processor B24 with dual-core</b> , integrated 1066MHz DDR3 memory controller, and 2MB L2 cache (1MB per core) <b>AMD Phenom™ II X2 Processor B57 with dual-core</b> , integrated 1066MHz DDR3 memory controller, 1MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3+										Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64				
Implementation	Processor in Socket AM3+										<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Windows Live™ Essentials</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>ATI™ Radeon™ HD 4250</b> , integrated in chipset, uses main memory, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX® 10.1, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with opt dual-head ATI Radeon discrete graphics adapter; <i>Maximum resolution: 2560x1440 (VGA) @75Hz; 2560x1600 (DisplayPort) @60Hz</i> None														
DP dongle	None														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), four SATA 6.0Gb/s connectors on planar														
eSATA port	None														
Media reader	None														
Chipset	<b>AMD 980G Chipset</b>														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), optional keyboard (PS/2), optional mouse (PS/2), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
IEEE 1394	None														
Ethernet	One gigabit ethernet port, Broadcom® BCM5761, DASH 1.1														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU														
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> EPEAT™ Gold rating ENERGY STAR® 5.2-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M77 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced September 20, 2011, or February 28, 2012  
 US models withdrawn effective November 2012 or May 2013

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**Memory**

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann 08/28/12
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Graphics**

*Small 2227/2209/1996/1997 support Low Profile:*

NVIDIA® Quadro® 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles)	0A36528	ann 04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI-I with a DVI to VGA converter)	0A36535	ann 06/28/11
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I with a DVI to VGA converter)	0A36538	ann 05/29/12
NVIDIA NVS 510 2GB Graphics Card by Lenovo	0B47077	ann 01/29/13

*Tower 1995/1990/1982/1983 support:*

NVIDIA Quadro 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59	0A36528	ann 04/26/11
NVIDIA Quadro 512MB NVS 450 (4-DP or 4-DVI-D via DP to DVI-D cable)	57Y4398	ann 01/19/10
NVIDIA Quadro 512MB 400 (DP, DVI-I)	0A36535	ann 06/28/11
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I)	0A36538	ann 05/29/12
NVIDIA NVS 510 2GB Graphics Card by Lenovo	0B47077	ann 01/29/13

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
USB Numeric Keypad	33L3225	ann 05/10/00
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 <sup>52</sup>	57Y6336	ann 12/08/09
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09
Lenovo Cherry Smartcard Keyboard	0A36328	ann 05/10/11

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic <sup>60</sup>	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Speaker M0520 (black)	57Y6360	ann 02/08/11
Lenovo Speaker M0520 (red)	57Y6361	ann 01/07/10
Lenovo Headphone P550	55Y2065	

<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Modem**

USB 2.0 Lenovo Modem	43R1814	ann 02/26/08
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann 09/13/11

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M81  
Small and Tower



Lenovo ThinkCentre M81 Tower  
with Lenovo ThinkVision monitor



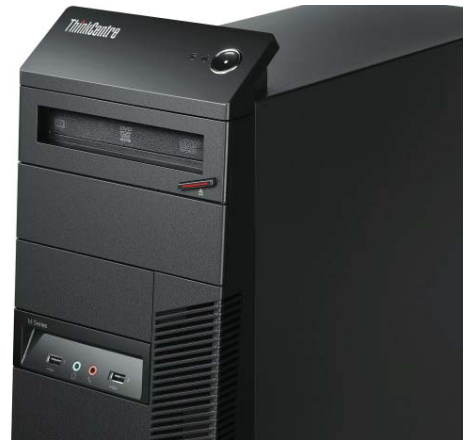
Lenovo ThinkCentre M81 Small



Lenovo ThinkCentre M81 Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M81 Tower



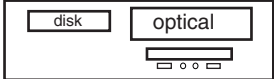
Lenovo ThinkCentre M81 Tower

# ThinkCentre® M81 Small (7518) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
7518-A8U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-A9U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B1U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<p><b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p>						<p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						<p><b>GREENGUARD® certified</b> RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p>					
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective October 2011 or November 2012

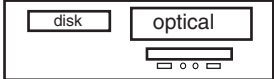
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 (METN1-3) November 2012

# ThinkCentre® M81 Small (7518) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
7518-C5U	4x3	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64					
Implementation	Processor in LGA1155 socket						<b>Preloaded applications<sup>20</sup></b> (only some listed)					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
							<b>GREENGUARD® certified</b> RoHS-compliant Supports ThinkVantage Technologies					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US model announced May 24, 2011  
 US model withdrawn effective November 2012

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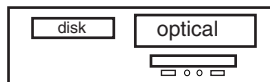
# ThinkCentre® M81 Small (7518) - TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
7518-D2U	4x3	Core i3-2100	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-D3U	4x3	Core i3-2100	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 32
7518-D1U	4x3	Pentium G620	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B7U	4x3	Core i3-2120	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
7518-B6U	4x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>		<p><b>Preloaded operating system</b></p> <p>Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64</p> <p><b>Preloaded applications</b><sup>20</sup> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, active Power Factor Correction		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



### Security

- Security chip (see information on left)
- Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Serial port I/O control
- Individual USB port disablement

GREENGUARD® certified  
RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information  
US models announced June 21, August 23, or September 6, 2011  
US models withdrawn effective November 2012

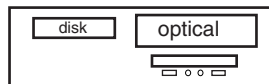
# ThinkCentre® M81 Small (7518) - TopSeller - IV - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7518-D6U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 32	11/08/11
7518-D4U	4x3	Core i3-2130	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 64	11/08/11
7518-D5U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	Switch	Stand	None	N N	Pro 64	11/08/11
7518-D7U	4x3	Core i3-2120	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11
7518-D8U	4x3	Core i3-2130	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11
7518-D9U	4x3	Core i5-2400	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	12/13/11
7518-E1U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>		<p><b>Preloaded operating system</b></p> <p>Some: Genuine Windows® 7 Professional 32</p> <p>Some: Genuine Windows 7 Professional 64</p> <p><b>Preloaded applications</b><sup>20</sup> (only some listed)</p> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, active Power Factor Correction		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



See footnotes for important warranty information

US models announced November 8, 2011, December 13, 2011, or February 21, 2012

US models withdrawn effective November 2012 or May 2013

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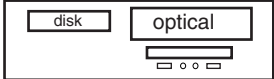
(METN1-20) May 2013

# ThinkCentre® M81 Small (5032) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
5032-C2U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
5032-C3U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64
5032-C4U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology						Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3											
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective November 2012

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 (METN1-1) November 2012

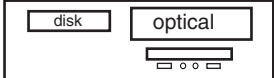
# ThinkCentre® M81 Small (5032) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
5032-E2U	4x3	Core i3-2100	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	05/24/11
5032-E3U	4x3	Pentium G840	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	05/24/11
5032-H2U	4x3	Pentium G850	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	01/24/12
5032-J1U	4x3	Core i3-2120	2GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12
5032-J2U	4x3	Core i5-2400	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12
5032-J3U	4x3	Core i3-2120	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12
5032-K2U	4x3	Core i3-2130	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12
5032-K3U	4x3	Core i5-2400	4GBx1 1333MHz	1TB 7200	DVD±RW	Intel HD	None	Stand	None	N N	Pro 64	02/21/12

• These models have a 3-year limited warranty

• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b>, Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>							<p><b>Preloaded operating system</b></p> <p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications<sup>20</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, active Power Factor Correction											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3											
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>GREENGUARD® certified RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>				

See footnotes for important warranty information

US models announced May 24, 2011, January 24, 2012, or February 21, 2012

US models withdrawn effective July or November 2012

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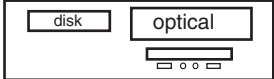
(METN1-9) November 2012

# ThinkCentre® M81 Small (5049) - ES 5.0 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
5049-D3U	4x3	Core i3-2100	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D4U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D5U	4x3	Core i5-2500	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-D6U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<p><b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p>						<p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3											
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>EPEAT™ Gold rating            ENERGY STAR® 5.0-compliant            GREENGUARD® certified            RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M81 sheet;            For Lenovo service upgrade options, please go to S-TC sheet</p>					

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective November 2012

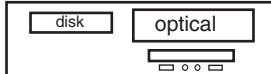
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 (METN1-2) November 2012

# ThinkCentre® M81 Small (5049) - ES 5.0 - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload
5049-F1U	4x3	Core i3-2120	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E7U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E8U	4x3	Pentium G840	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-E9U	4x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-H3U	4x3	Core i3-2130	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64
5049-H4U	4x3	Pentium G850	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>						<p><b>Preloaded operating system</b></p> <p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications<sup>20</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<p><b>Intel Q65 Express Chipset</b></p> <p>Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O</p>											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>EPEAT™ Gold rating                      ENERGY STAR® 5.0-compliant                      GREENGUARD® certified                      RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M81 sheet;                      For Lenovo service upgrade options, please go to S-TC sheet</p>					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US models announced May 24 or December 6, 2011  
 US models withdrawn effective July or November 2012

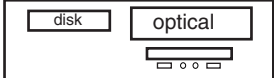
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 (METN1-10) November 2012

# ThinkCentre® M81 Small (5049) - ES 5.0 - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>g</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
5049-J2U	4x3	Pentium G630	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64	01/24/12
5049-J1U	4x3	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	N N	Pro 64	01/24/12

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed)				
Implementation	Processor in LGA1155 socket							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader							<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
												
							Supports ThinkVantage Technologies					
							For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
 US models announced January 24, 2012  
 US models withdrawn effective November 2012

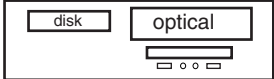
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 (METN1-23) November 2012

# ThinkCentre® M81 Small (0385) - ES 5.0 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
0385-A1U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>						Genuine Windows® 7 Professional 32					
Implementation	Processor in LGA1155 socket						<b>Preloaded applications (only some listed)</b>					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader						<b>Security</b>					
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant					
							Supports ThinkVantage Technologies					
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US model announced April 5, 2011  
 US model withdrawn effective November 2012

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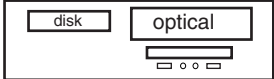


# ThinkCentre® M81 Small (0385) - ES 5.0 (GMP) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
0385-A2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64					
Implementation	Processor in LGA1155 socket						<b>Preloaded applications<sup>20</sup></b> (only some listed)					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader						<b>Security</b>					
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3						<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant					
							Supports ThinkVantage Technologies					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US model announced June 21, 2011  
 US model withdrawn effective November 2012

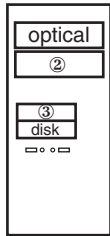
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 (METN1-16) November 2012

# ThinkCentre® M81 Tower (7517) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
7517-A2U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A3U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A4U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology <b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology Processor in LGA1155 socket						Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>					
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective November 2012

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 (METN1-7) November 2012

# ThinkCentre® M81 Tower (7517) -TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
7517-A5U	4x4	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- This small and medium business (SMB) model is part of the US TopSeller™ Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

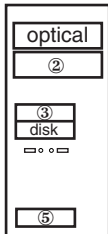
Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64					
Implementation	Processor in LGA1155 socket						<b>Preloaded applications<sup>20</sup></b> (only some listed)					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3											
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies					
							For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

# ThinkCentre® M81 Tower (7517) -TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
7517-A6U	4x4	Core i3-2100	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A9U	4x5	Core i3-2120	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64
7517-A8U	4x5	Pentium G630	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed)					
Implementation	Processor in LGA1155 socket						<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced June 21, August 23, or September 6, 2011  
 US models withdrawn effective November 2012

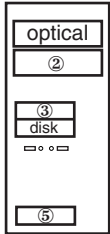
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 (METN1-18) November 2012

# ThinkCentre® M81 Tower (7517) -TopSeller - IV - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7517-B1U	4x5	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	11/08/11
7517-B2U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	Switch	None	N N	Pro 64	11/08/11
7517-B3U	4x5	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	Switch	None	N N	Pro 32	11/08/11
7517-B4U	4x5	Core i3-2120	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11
7517-B5U	4x5	Core i3-2130	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11
7517-B6U	4x5	Core i5-2400	4GBx1 1333MHz	250G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/13/11
7517-C1U	4x5	Core i5-2400	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	Switch	None	N N	Pro 64	02/21/12
7517-D2U	4x5	Core i3-2130	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	02/21/12
7517-D3U	4x5	Core i5-2400	4GBx1 1333MHz	1TB 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	02/21/12

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<b>Mainstream enterprise stability and manageability</b>		<p><b>Preloaded operating system</b></p> <p>Some: Genuine Windows® 7 Professional 32</p> <p>Some: Genuine Windows 7 Professional 64</p> <p><b>Preloaded applications</b><sup>20</sup> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 5.25", 1.6" high, access, open</p> <p>Bay 3: 3.5", 1" high, access, opt reader</p> <p>Bay 4: 3.5", 1" high, no access, std disk</p> <p>Bay 5: 3.5", 1" high, no access, opt disk</p>		
Slot	<p>Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>		
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
			
	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Some: Chassis intrusion switch</li> </ul>		
	GREENGUARD® certified RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced Nov 8, 2011, Dec 13, 2011, or Feb 21, 2012  
 US models withdrawn effective November 2012

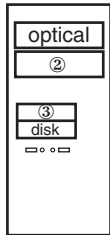
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 (METN1-21) November 2012

# ThinkCentre® M81 Tower (5030) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5030-D5U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-D6U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-D7U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<p><b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p>						<p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>GREENGUARD® certified RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p>					
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective November 2012

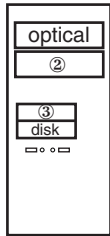
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 (METN1-5) November 2012

# ThinkCentre® M81 Tower (5030) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5030-E9U	4x4	Pentium G840	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-F1U	4x4	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64
5030-E8U	4x4	Core i3-2100	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

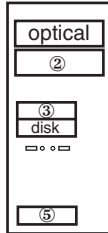
Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed)					
Implementation	Processor in LGA1155 socket						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet					

# ThinkCentre® M81 Tower (5030) - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
5030-F5U	4x4	Pentium G620	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64	06/21/11
5030-G1U	4x5	Core i3-2130	4GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	None	N N	Pro 64	12/06/11
5030-H2U	4x4	Core i3-2120	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64	01/24/12
5030-H3U	4x4	Pentium G850	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64	01/24/12
5030-G2U	4x4	Core i3-2120	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64	02/21/12
5030-J1U	4x4	Core i3-2120	2GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	None	N N	Pro 64	02/21/12

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, manual switch											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>							<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3							GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies				
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced June 21, 2011, Dec 6, 2011, Jan 24, 2012, or Feb 21, 2012  
 US models withdrawn effective November 2012

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 (METN1-17) November 2012



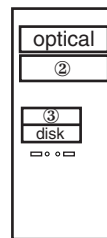
# ThinkCentre® M81 Tower (5048) - ES 5.0 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5048-D3U	4x4	Core i3-2100	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D4U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D5U	4x4	Core i5-2500	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-D6U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<p><b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</p>						<p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk						<p>EPEAT™ Gold rating</p> <p>ENERGY STAR® 5.0-compliant</p> <p>GREENGUARD® certified</p> <p>RoHS-compliant</p>					
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>					
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											



See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective November 2012

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 (METN1-6) November 2012

# ThinkCentre® M81 Tower (5048) - ES 5.0 - II - withdrawn

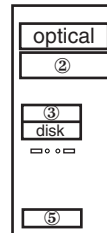
Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload
5048-E7U	4x4	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E8U	4x4	Pentium G840	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E6U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-E9U	4x4	Core i3-2120	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-F1U	4x4	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64
5048-H3U	4x5	Pentium G850	2GBx1 1333MHz	320G 7200	Bay	DVD±RW	Intel HD	None	ES50	N N	Pro 64

• These models have a 3-year limited warranty

• These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>					
Processor	<p><b>Intel® Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G840 Processor (2 cores / 2 threads, 2.8GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Pentium G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b>, Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache)</b>, Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p>						<p>Genuine Windows® 7 Professional 64</p> <p><b>Preloaded applications<sup>20</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	None											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>						<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)						<p>EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant</p>					
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<p>Supports ThinkVantage Technologies</p>					
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						<p>For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet</p>					



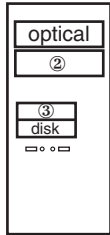
See footnotes for important warranty information  
 US models announced May 24 or December 6, 2011  
 US models withdrawn effective July or November 2012

# ThinkCentre® M81 Tower (5048) - ES 5.0 - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global Educ	Win7 preload	Ann date (mm/dd/yy)
5048-J1U	4x4	Core i3-2120	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64	01/24/12
5048-J2U	4x4	Core i3-2120	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	ES50	N N	Pro 64	01/24/12

- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>										
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										
Implementation	Processor in LGA1155 socket										
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset										
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk										
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3										
											
	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>										
	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>										
	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant										
	Supports ThinkVantage Technologies										
	For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet										
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information  
 US models announced January 24, 2012  
 US models withdrawn effective November 2012

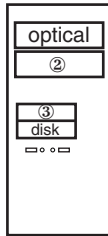
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 (METN1-22) November 2012

# ThinkCentre® M81 Tower (1730) - ES 5.0 (GMP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
1730-A1U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	G P	Pro 32

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>						Genuine Windows® 7 Professional 32				
Implementation	Processor in LGA1155 socket						<b>Preloaded applications (only some listed)</b>				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset										
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk										
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
							Supports ThinkVantage Technologies				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced April 5, 2011  
 US model withdrawn effective November 2012

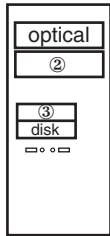
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 (METN1-8) November 2012

# ThinkCentre® M81 Tower (1730) - ES 5.0 (GMP) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Global (G) GMP (P)	Win7 preload
1730-A2U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	G P	Pro 64

- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Mainstream enterprise stability and manageability</i>						<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller						Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket						<b>Preloaded applications (only some listed)</b>				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets						<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset										
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, two SATA 3.0Gb/s connectors, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q65 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk										
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3						<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
							EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
							Supports ThinkVantage Technologies				
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available						For compatible accessories, please go to O-M81 sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced June 21, 2011  
 US model withdrawn effective November 2012

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 (METN1-19) November 2012

**Memory**

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann	01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann	01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann	04/12/11

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann	09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann	08/23/11

Tower 5030/5048/7517/1730 support:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann	03/31/09
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**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann	01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann	11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann	08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann	03/31/09
USB 2.0 Portable 320GB Hard Disk	45K1689	ann	03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann	05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann	11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann	11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann	11/29/11
USB 3.0 Secure 1TB Hard Drive	0A65621	ann	08/28/12
Slim USB Portable DVD Burner	0A33988	ann	06/14/11

**Graphics**

Small 7518/5032/5049/0385 support Low Profile:

NVIDIA® Quadro® 256MB NVS 295 (2-DP) <sup>67</sup>	45K1669	ann	04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles) <sup>67</sup>	0A36528	ann	04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36535	ann	06/28/11
NVIDIA Quadro 1GB 600 (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36183	ann	10/26/10
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) <sup>67</sup>	57Y4167	ann	03/02/10
AMD 7450 1GB (DP, DVI-I with a DVI to VGA converter) <sup>67</sup>	0A36538	ann	05/29/12
NVIDIA NVS 510 2GB Graphics Card by Lenovo <sup>67</sup>	0B47077	ann	01/29/13

Tower 7517/5030/5048/1730 support 75 watts max:

NVIDIA Quadro 256MB NVS 295 (2-DP) <sup>67</sup>	45K1669	ann	04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 <sup>67</sup>	0A36528	ann	04/26/11
NVIDIA Quadro 512MB 400 (DP, DVI-I) <sup>67</sup>	0A36535	ann	06/28/11
NVIDIA Quadro 512MB NVS 450 (4-DP or 4-DVI-D via DP to DVI-D cable)	57Y4398	ann	01/19/10
NVIDIA Quadro 1GB 600 (DP, DVI-I) <sup>67</sup>	0A36183	ann	10/26/10
NVIDIA Quadro 1GB 2000 (2-DP, DVI-I) <sup>67</sup>	57Y4479	ann	10/26/10
NVIDIA GeForce 310 512MB DMS59 <sup>67</sup>	57Y4167	ann	03/02/10
AMD 7450 1GB (DP, DVI-I) <sup>67</sup>	0A36538	ann	05/29/12
NVIDIA NVS 510 2GB Graphics Card by Lenovo <sup>67</sup>	0B47077	ann	01/29/13

<sup>67</sup> Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann	06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann	06/04/02
Enhanced Performance USB Keyboard	73P2620	ann	03/23/04
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann	04/05/11
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann	08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann	02/22/05

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann	05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann	08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann	01/23/07
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann	12/20/11
ThinkPad USB Laser Mouse	57Y4635	ann	12/15/09
Lenovo Optical Mouse A6010	57Y6255		
Lenovo Mini Optical Mouse M20B	55Y2091		
Lenovo Wireless Mouse N30B	55Y9360		

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic <sup>60</sup>	57Y4488	ann	01/07/10
Lenovo Mini Speakers M220	55Y2033	ann	01/07/10
Lenovo Headphone P550	55Y2065		

<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann	12/29/03
ensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann	09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann	08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann	02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann	10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann	09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann	10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann	10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann	09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann	09/13/11

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann	05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann	08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann	08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann	09/13/11
Lenovo USB Soundbar	0A36190	ann	05/01/12
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann	12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann	09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann	08/24/10
ThinkCentre Extend Arm	57Y4352	ann	07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

- [www.lenovo.com/accessories](http://www.lenovo.com/accessories)  
Purchase Lenovo accessories
- [www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
Product specifications on Lenovo Support
- [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)  
Option Compatibility Matrix (OCM) and accessory brochures
- [www.lenovoquickpick.com](http://www.lenovoquickpick.com)  
An Options Compatibility Configurator for Lenovo systems

Lenovo ThinkCentre M90/M90p Eco Ultra Small, Small, Tower

ThinkCentre®



Lenovo ThinkCentre M90/M90p  
Eco Ultra Small



Lenovo ThinkCentre M90/M90p  
Eco Ultra Small



Lenovo ThinkCentre M90/M90p  
Small



Lenovo ThinkCentre M90/M90p Small  
with ThinkVision L2251x (2578-HB6)



Lenovo ThinkCentre M90/M90p Tower



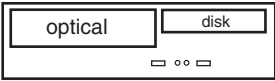
Lenovo ThinkCentre M90/M90p Tower

# ThinkCentre® M90 Eco Ultra Small (3244) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
3244-A1U	1x2	Core i3-530	2.93 2	2GB	250GB <sup>b</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3244-A2U	1x2	Pentium G6950	2.80 2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor G6950 with dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 with dual-core</b>, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache                      Processor in LGA1156 socket</p>		<p><b>Eco Ultra Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation	<p><b>2GB std</b>, 8GB max, <b>PC3-10600 1333MHz DDR3*</b>, two 204-pin SODIMM sockets (notebook);  <i>Non-italics</i>: standard memory in one socket; one socket available                      * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		
Memory	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display                      ** DirectX 10 is only available with Windows Vista and later</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Graphics	<p><b>Intel Q57 Express Chipset</b>, Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O</p>		
DP dongle	None		
SATA disk	<p><b>250GB</b>, SATA 3.0Gb/s 7200 rpm                      Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive                      Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical</p>		
SATA DVD±RW	None		
SATA Controller	None		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)                      Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)                      Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)                      High Definition (HD) Audio, Realtek® ALC662 codec                      Internal speaker for business audio                      One gigabit ethernet port, Intel 82578DM, Wake on LAN®                      None                      None                      None                      STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant</p>		
Front ports	None		
Rear ports	None		
Rear audio ports	None		
Audio	None		
Speaker	None		
Ethernet	None		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <p>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                      1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918                      Super Multi-Burner DL DVD±RW SATA Drive 41N5620                      DisplayPort to Single-link DVI-D Cable 45J7915                      DisplayPort to VGA Monitor Cable 57Y4393                      Lenovo Vertical PC and Monitor Stand II 41R4474                      ThinkCentre Ultra Small Under Desk Mount 40Y8625                      More accessories on O-M90 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)			
<b>Preloaded applications<sup>5</sup></b> (only some listed)			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD±RW)			

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective February or October 2010

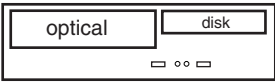


# ThinkCentre® M90 Eco Ultra Small (3244) - TopS (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3244-A8U	1x2	Core i3-530	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 10
3244-B4U	1x2	Core i3-550	3.20	2	2GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Jan 11

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<b>Ultimate security, stability, and manageability for the enterprise Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache</b> Processor in LGA1156 socket		<b>Eco Ultra Small</b> 
Implementation	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3		
Memory	<b>2GB std, 8GB max, PC3-10600 1333MHz DDR3,</b> two 204-pin SODIMM sockets (notebook); <i>Non-italics: standard memory in one socket; one socket available</i>		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		
DP dongle	None		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> <p style="text-align: center;"><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<b>250GB or 320GB,</b> SATA 3.0Gb/s 7200 rpm SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA Controller Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset,</b> Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 More accessories on O-M90 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
- <i>Some:</i> Genuine Windows® 7 Professional 32			
- <i>Some:</i> Genuine Windows 7 Professional 64			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)			
• Rescue and Recovery™			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			


See footnotes for important warranty information  
 US models announced March 2 or December 28, 2010  
 US models withdrawn effective April or November 2011

# ThinkCentre® M90 Eco Ultra Small (3692) - XP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
3692-A1U	1x2	Pentium G6950	2.80	2	1GB	250GB <sup>b</sup>	DVD	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3692-A2U	1x2	Pentium G6950	2.80	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3692-A3U	1x2	Core i3-530	2.93	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3692-F8U	1x2	Core i3-540	3.06	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Jun 10


- **Most powerful, stable, and manageable desktop with next generation Intel platform**
- **These models have a 3-year limited warranty!**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Processor G6950 with dual-core</b> , Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-540 with dual-core</b> , Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	<b>Eco Ultra Small</b>  <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation		
Memory	<b>1GB or 2GB std</b> , 8GB max, <b>PC3-10600 1333MHz DDR3*</b> , two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available * System automatically clocks down for processors with 1066MHz DDR3 memory controller	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 512MB [ <i>1GB model</i> ], 1GB [ <i>2GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later	
DP dongle	None	<b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm	
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Windows® XP Professional preinstalled through downgrade rights in Genuine	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
	DisplayPort to Single-link DVI-D Cable 45J7915	
	DisplayPort to VGA Monitor Cable 57Y4393	
	Lenovo Vertical PC and Monitor Stand II 41R4474	
	ThinkCentre Ultra Small Under Desk Mount 40Y8625	
	More accessories on O-M90 sheet	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>		
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• Lenovo System Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Adobe Flash® Player		
• Skype™ for Windows		
• Microsoft® Office 2007 Trial (60-day)		
• Corel® Burn.Now™ (DVD±RW)		
• Corel DVD MovieFactory® (DVD±RW)		
• Corel WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information  
US models announced January 15 or June 1, 2010  
US models withdrawn effective October 2010

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3692-A4U	1x2	Core i3-530	2.93	2	2GB	250GB <sup>b</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Feb 10
3692-H6U	1x2	Core i3-550	3.20	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 11
3692-E7U	1x2	Pentium G6950	2.80	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Feb 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor G6950 with dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-550 with dual-core</b>, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache                      Processor in LGA1156 socket</p>		<p><b>Eco Ultra Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Memory	<p><b>2GB std</b>, 8GB max, <b>PC3-10600 1333MHz DDR3*</b>, two 204-pin SODIMM sockets (notebook);  <i>Non-italics</i>: standard memory in one socket; one socket available                      * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		
Graphics	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Implementation			
DP dongle	None		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel Q57 Express Chipset</b>, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		


See footnotes for important warranty information  
 US models announced January 15, 2010 or February 8, 2011  
 US models withdrawn effective April 2010 or November 2011

# ThinkCentre® M90 Eco Ultra Small (5226) - GMP (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5226-A1U	1x2	Core i3-550	3.20	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	G P	Dec 10

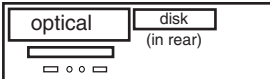
- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ i3 Processor i3-550 with dual-core,</b> Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket</p>		<p><b>Eco Ultra Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation Memory	<p><b>2GB std,</b> 8GB max, <b>PC3-10600 1333MHz DDR3,</b> two 204-pin SODIMM sockets (notebook); <i>Non-italics:</i> standard memory in one socket; one socket available</p>		
Graphics	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p>		
DP dongle	None		
SATA disk	<p><b>250GB,</b> SATA 3.0Gb/s 7200 rpm Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		
SATA DVD±RW	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
SATA Controller	None		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel Q57 Express Chipset,</b> Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® 7 Professional 32</p>		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<p>• Rescue and Recovery™</p> <p>• ThinkVantage System Update</p> <p>• ThinkVantage Power Manager</p> <p>• ThinkVantage Toolbox</p> <p>• Norton™ Internet Security 2011 (30 days of virus definitions)</p> <p>• Adobe® Reader®</p> <p>• Adobe Flash® Player</p> <p>• Skype™ for Windows</p> <p>• Microsoft Office 2010 preloaded; purchase product key to activate</p> <p>• Corel® Burn.Now™ (DVD±RW)</p> <p>• Corel DVD MovieFactory® (DVD±RW)</p>		
<b>Accessories</b>	<p>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</p> <p>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</p> <p>DisplayPort to Single-link DVI-D Cable 45J7915</p> <p>DisplayPort to VGA Monitor Cable 57Y4393</p> <p>Lenovo Vertical PC and Monitor Stand II 41R4474</p> <p>More accessories on O-M90 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>
			<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p>
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service®</li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
US model announced November 30, 2010  
US model withdrawn effective November 2011

# ThinkCentre® M90 Small (3245) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
3245-A1U	2x3	Core i3-530	2.93 2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3245-A2U	2x3	Pentium G6950	2.80 2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3245-A8U	2x3	Core i5-750	2.66 4	3GB	500GB	DVD±RW	310	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
<ul style="list-style-type: none"> <li>• <b>The most powerful, stable, and manageable desktop with next generation Intel platform</b></li> <li>• <b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> </ul>														
Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor G6950</b> with <b>dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530</b> with <b>dual-core</b>, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-750</b> with <b>quad-core</b>, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache Processor in LGA1156 socket</p>							Small	 <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, no access, std disk                      Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16 (75w max)                      Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>					
Implementation									<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>					
Memory	<p><b>2GB or 3GB std.</b>, 16GB max, <b>UDIMM</b>, <b>PC3-10600 1333MHz DDR3*</b>, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available                      * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>													
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display  <i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCIe x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts                      ** DirectX 10 is only available with Windows Vista and later</p>													
DP dongle	None													
SATA disk	<p><b>250GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm                      Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive                      Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical</p>													
SATA DVD±RW	None													
SATA Controller	None													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>Intel Q57 Express Chipset</b>, Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O</p>													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®													
Intel AMT	None													
Modem	None													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo													
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction													
<b>Preloaded operating system<sup>20</sup></b>	<p>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)</p>													
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo System Toolbox</li> <li>• Norton™ Internet Security 2011 (30-day)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>													
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> <li>NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>													
								<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>						

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective February or October 2010

# ThinkCentre® M90 Small (3245) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3245-A9U	2x3	Core i3-530	2.93	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 10
3245-B3U	2x3	Core i3-530	2.93	2	4GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Mar 10
3245-B7U	2x3	Core i3-550	3.20	2	2GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 64	None	Dec 10
3245-B1U	2x3	Core i5-750	2.66	4	3GB	500GB	DVD±RW	<b>310</b>	VGA, DP	ES50	None	Pro 32	None	Mar 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Core™ i3 Processor i3-530 or i3-550</b> with <b>dual-core</b>, Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or <b>Intel Core i5 Processor i5-750</b> with <b>quad-core</b>, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket</p>		<p><b>Small</b></p> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16 (45w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
Memory	<p><b>2GB, 3GB, or 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3</b>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available</p>		
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display  <i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p>		<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p>
DP dongle	None		
SATA disk	<p><b>250GB, 320GB, or 500GB</b>, SATA 3.0Gb/s 7200 rpm Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA DVD±RW	None		
SATA Controller	None		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<p><b>Intel Q57 Express Chipset</b>, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>- <i>Some:</i> Genuine Windows® 7 Professional 32 1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>- <i>Some:</i> Genuine Windows 7 Professional 64 2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> <li>NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

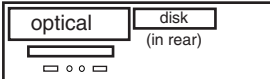
See footnotes for important warranty information  
 US models announced March 2 or November 30, 2010  
 US models withdrawn effective April 2011 or July 2011

# ThinkCentre® M90 Small (5485) - XP with Win7 License - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
5485-A1U	2x3	Pentium G6950	2.80	2	1GB	250GB <sup>2</sup>	DVD	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5485-A2U	2x3	Pentium G6950	2.80	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5485-A3U	2x3	Core i3-530	2.93	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5485-J4U	2x3	Core i3-540	3.06	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Jun 10
5485-A4U	2x3	Core i5-750	2.66	4	3GB	500GB	DVD±RW	<b>310</b>	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Processor G6950 with dual-core,</b> Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-540 with dual-core,</b> Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-750 with quad-core,</b> Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache Processor in LGA1156 socket</p>		<p><b>Small</b></p> 
Implementation	<p>Processor in LGA1156 socket</p>		<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16 (75w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Memory	<p><b>1GB, 2GB, or 3GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3*</b>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available                  * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 512MB [<i>1GB model</i>], 1GB [<i>2GB and 3GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display  <i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p> <p>** DirectX 10 is only available with Windows Vista and later</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
DP dongle	<p>None</p>		
SATA disk	<p><b>250GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm</p>		<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p>
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>		
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA Controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical</p>		
eSATA port	<p>None</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Chipset	<p><b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O</p>		
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>		
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>		
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>		
Speaker	<p>Internal speaker for business audio</p>		
Ethernet	<p>One gigabit ethernet port, Intel 82578DM, Wake on LAN®</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>		
Power supply	<p>240 watts with 85% efficiency, auto-sensing, active Power Factor Correction</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	1GB PC3-10600 DDR3 UDIMM	57Y4389	
	2GB PC3-10600 DDR3 UDIMM	57Y4390	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	DisplayPort to Single-link DVI-D Cable	45J7915	
	DisplayPort to VGA Monitor Cable	57Y4393	
	NVIDIA GeForce 512MB 310 (DP, VGA)	57Y4397	
	NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396	
	More accessories on O-M90 sheet		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30-day)			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD, DVD±RW)			

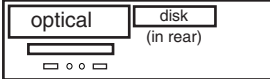
See footnotes for important warranty information  
 US models announced January 15 or June 1, 2010  
 US models withdrawn effective October 2010

# ThinkCentre® M90 Small (5485) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
5485-A5U	2x3	Core i3-530	2.93	2	2GB	250GB <sup>b</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Feb 10
5485-K8U	2x3	Core i3-550	3.20	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Mar 11
5485-E3U	2x3	Pentium G6950	2.80	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	None	Feb 10
5485-E4U	2x3	Core i5-750	2.66	4	3GB	500GB	DVD±RW	<b>310</b>	VGA, DP	ES50	None	Pro 32	None	Feb 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Processor G6950 with dual-core</b> , Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-550 with dual-core</b> , Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-750 with quad-core</b> , Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache Processor in LGA1156 socket	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Memory	<b>2GB or 3GB std.</b> , 16GB max, <b>UDIMM</b> , <b>PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available * System automatically clocks down for processors with 1066MHz DDR3 memory controller	• Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless system board retention • System floor stand for vertical orientation	
Graphics	<i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display <i>Some:</i> <b>NVIDIA® GeForce® 310</b> , PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
DP dongle	None		
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		<b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		Supports ThinkVantage® technologies
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction		
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32	<b>Accessories</b>	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> <li>NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
			<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced January 15, 2010 or February 8, 2011  
 US models withdrawn effective April 2011 or July 2011

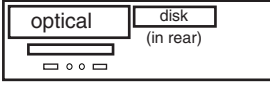


# ThinkCentre® M90 Small (5567) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5567-A1U	2x3	Core i3-550	3.20	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	G P	Dec 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i3 Processor i3-550</b> with dual-core, Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket											<b>Small</b> 																	
Implementation	Processor in LGA1156 socket																												
Memory	<b>2GB std</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Non-italics: standard memory in one socket; three sockets available</i>											<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>																	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display																												
DP dongle	None																												
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm																												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																												
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical																												
eSATA port	None																												
Diskette drive	None																												
Media reader	None																												
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O											<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>																	
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Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																												
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Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																												
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																												
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction											<p align="center"><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>																	
<b>Preloaded operating system<sup>20</sup></b>	<b>Genuine Windows® 7 Professional 32</b>																												
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>																												
	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>NVIDIA® GeForce® 512MB 310 (DP, VGA)</td> <td>57Y4397</td> </tr> <tr> <td>NVIDIA Quadro® 512MB FX380 LP (DP, DVI)</td> <td>57Y4396</td> </tr> </table> <p>More accessories on O-M90 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>											1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396
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Supports ThinkVantage® technologies																													
<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																													

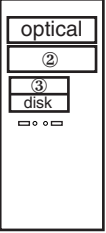
See footnotes for important warranty information  
US model announced November 30, 2010  
US model withdrawn effective July 2011

# ThinkCentre® M90 Tower (3246) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
3246-A1U	4x4	Pentium G6950	2.80	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3246-A2U	4x4	Core i3-530	2.93	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
3246-A9U	4x4	Core i5-750	2.66	4	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Pentium® Processor G6950</b> with <b>dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or</p> <p><b>Intel Core™ i3 Processor i3-530</b> with <b>dual-core</b>, Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or</p> <p><b>Intel Core i5 Processor i5-750</b> with <b>quad-core</b>, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache</p> <p>Processor in LGA1156 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>	
Memory	<p><b>2GB or 3GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3<sup>3</sup></b>, four 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in two sockets; two sockets available;</p> <p><i>Non-italics:</i> standard memory in one socket; three sockets available</p> <p>* System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p> <p>** DirectX 10 is only available with Windows Vista and later</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
DP dongle	None		<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>	
SATA disk	<p><b>250GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm</p>		<p>Supports ThinkVantage® technologies</p>	
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
SATA Controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in chipset, three SATA connectors for disk and optical</p>			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<p><b>Intel Q57 Express Chipset</b></p> <p>Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O</p>			
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>			
Rear ports	<p>Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)</p>			
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>			
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>			
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>			
Speaker	<p>Internal speaker for business audio</p>			
Ethernet	<p>One gigabit ethernet port, Intel 82578DM, Wake on LAN®</p>			
Intel AMT	None			
Modem	None			
Security chip	<p>STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant</p>			
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>			
Mouse	<p>Optical Wheel Mouse (USB connector), black, Lenovo logo</p>			
Power supply	<p>280 watts with variable speed fan, autosensing, 85% PSU</p>			
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>			
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	1GB PC3-10600 DDR3 UDIMM	57Y4389		
	2GB PC3-10600 DDR3 UDIMM	57Y4390		
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
	DisplayPort to Single-link DVI-D Cable	45J7915		
	DisplayPort to VGA Monitor Cable	57Y4393		
	NVIDIA GeForce 512MB 310 (DP, VGA)	57Y4397		
	More accessories on O-M90 sheet			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
<b>Preloaded applications<sup>5</sup> (only some listed)</b>				
• Rescue and Recovery™				
• Client Security Solution™				
• ThinkVantage Productivity Center				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• Lenovo System Toolbox				
• Norton™ Internet Security 2011 (30-day)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Microsoft® Office 2007 Trial (60-day)				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				
• Corel WinDVD® (DVD±RW)				

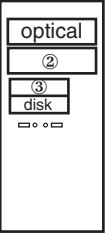
See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective February or October 2010

# ThinkCentre® M90 Tower (3246) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3246-B1U	4x4	Core i3-530	2.93	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD 310	VGA, DP	ES50	None	Pro 32	None	Mar 10
3246-B2U	4x4	Core i5-750	2.66	4	3GB	500GB	None	DVD±RW	310	VGA, DP	ES50	None	Pro 32	None	Mar 10
3246-B4U	4x4	Core i3-530	2.93	2	4GB	320GB	None	DVD±RW	Intel HD 310	VGA, DP	ES50	None	Pro 64	None	Mar 10
3246-B9U	4x4	Core i3-550	3.20	2	2GB	320GB	None	DVD±RW	Intel HD 310	VGA, DP	ES50	None	Pro 64	None	Dec 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core</b>, Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or <b>Intel Core i5 Processor i5-750 with quad-core</b>, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation			
Memory	<p><b>2GB, 3GB, or 4GB std</b>, 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b>, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available</p>	<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>	
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [<i>2GB models</i>] or 1759MB [<i>4GB models</i>]), one analog VGA DB-15 connector, one DisplayPort™ conn, supports dual independent display</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p>	<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
DP dongle	None		
SATA disk	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- <i>Some:</i> Genuine Windows® 7 Professional 32</li> <li>- <i>Some:</i> Genuine Windows 7 Professional 64</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> </ul> <p>More accessories on O-M90 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

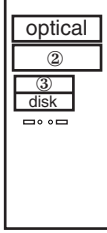
See footnotes for important warranty information  
 US models announced March 2 or November 30, 2010  
 US models withdrawn effective April 2011 or July 2011

# ThinkCentre® M90 Tower (5474) - XP with Win7 License - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
5474-A1U	4x4	Pentium G6950	2.80	2	1GB	250GB <sup>2</sup>	None	DVD	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5474-A2U	4x4	Pentium G6950	2.80	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5474-A3U	4x4	Core i3-530	2.93	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10
5474-F8U	4x4	Core i3-540	3.06	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	XP Pro	Pro 32	None	Jun 10
5474-A4U	4x4	Core i5-750	2.66	4	3GB	500GB	None	DVD±RW	<b>310</b>	VGA, DP	ES50	None	XP Pro	Pro 32	None	Feb 10

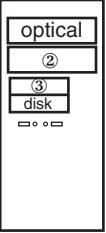
**• The most powerful, stable, and manageable desktop with next generation Intel platform**  
**• These models have a 3-year limited warranty<sup>1</sup>**

<b>Positioning Processor</b> <i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Pentium® Processor G6950</b> with dual-core, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530</b> or <b>i3-540</b> with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-750</b> with quad-core, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache Processor in LGA1156 socket	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.4" D X 16.3" H</li> <li>175mm W X 442mm D X 414mm H</li> <li>24.2 lb (11.0 kg) in max configuration</li> <li>Handle on top front</li> <li>Power button on top handle</li> <li>Toolless cover removal</li> <li>Tilted front I/O for easy access</li> <li>Toolless disk, optical drive removal</li> <li>Toolless adapter retention</li> </ul> 
<b>Implementation</b> Processor in LGA1156 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
<b>Memory</b> <b>1GB, 2GB, or 3GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3*</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available * System automatically clocks down for processors with 1066MHz DDR3 memory controller	Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
<b>Graphics</b> <i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 512MB [1GB model], 1GB [2GB and 3GB models]), one analog VGA DB-15 conn, one DisplayPort™ connector, supports dual independent display <i>Some:</i> <b>NVIDIA® GeForce® 310</b> , PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts ** DirectX 10 is only available with Windows Vista and later	<b>Security</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard and mouse</li> <li>Serial port I/O control</li> <li>Individual USB port disablement</li> </ul>
<b>DP dongle</b> None	<b>Environmental Features</b> <ul style="list-style-type: none"> <li>EPEAT™ Gold rating</li> <li>ENERGY STAR® 5.0-compliant</li> <li>GREENGUARD® certified</li> <li>RoHS-compliant</li> </ul>
<b>SATA disk</b> <b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm <b>SATA DVD</b> <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive <b>SATA DVD±RW</b> <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <b>SATA Controller</b> Serial ATA, SATA 3.0Gb/s, integrated in chipset, three SATA connectors for disk and optical	Supports ThinkVantage® technologies
<b>eSATA port</b> None <b>Diskette drive</b> None <b>Media reader</b> None	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
<b>Chipset</b> <b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O	
<b>Front ports</b> Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) <b>Rear ports</b> Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort) <b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm) <b>Internal connector</b> Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports) <b>Audio</b> High Definition (HD) Audio, Realtek® ALC662 codec <b>Speaker</b> Internal speaker for business audio <b>Ethernet</b> One gigabit ethernet port, Intel 82578DM, Wake on LAN® <b>Intel AMT</b> None <b>Modem</b> None <b>Security chip</b> STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
<b>Keyboard</b> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo <b>Mouse</b> Optical Wheel Mouse (USB connector), black, Lenovo logo <b>Power supply</b> 280 watts with variable speed fan, autosenesing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b> - Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD) <b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>ThinkVantage Power Manager</li> <li>Lenovo System Toolbox</li> <li>Norton™ Internet Security 2011 (30-day)</li> <li>Microsoft® Office 2007 Trial (60-day)</li> <li>Corel® Burn.Now™ (DVD±RW)</li> <li>Corel DVD MovieFactory® (DVD±RW)</li> <li>Corel WinDVD® (DVD, DVD±RW)</li> </ul>	<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf lenovo.com/accessoriesguide</li> <li>Other accessories at lenovo.com/accessories</li> </ul>

See footnotes for important warranty information  
 US models announced January 15 or June 1, 2010  
 US models withdrawn effective October 2010

Type-model	Slot x bay	Processor	GHz Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
5474-A5U	4x4	Core i3-530	2.93 2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro32	None	Feb 10
5474-G6U	4x4	Core i3-550	3.20 2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro32	None	Mar 11
5474-D4U	4x4	Pentium G6950	2.80 2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro32	None	Feb 10
5474-D5U	4x4	Core i5-750	2.66 4	3GB	500GB	None	DVD±RW	<b>310</b>	VGA, DP	ES50	None	Pro32	None	Feb 10

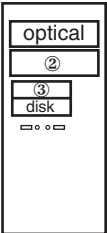
- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Pentium® Processor G6950 with dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-550 with dual-core</b>, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-750 with quad-core</b>, Intel 64, Virtualization Technology, Turbo Boost Technology (up to 3.20 GHz at max turbo mode), integrated 1333MHz dual-channel DDR3 memory controller, 8MB cache Processor in LGA1156 socket</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk</p>	
Memory	<p><b>2GB or 3GB std</b>, 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3*</b>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available                  * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                  Slot 2: half-length, full-height, PCIe 2.0 x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [<i>2GB models</i>], 1277MB [<i>3GB model</i>]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 310</b>, PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p>			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
DP dongle	None			<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm			<p>Supports ThinkVantage® technologies</p>
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<p><b>Intel Q57 Express Chipset</b>, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O</p>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® 7 Professional 32</p>		<p><b>Accessories</b></p>	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		<ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA GeForce 512MB 310 (DP, VGA) 57Y4397</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	
			<p>↪ <b>3-year parts and labor</b></p> <p>↪ <b>International Warranty Service<sup>9</sup></b></p> <p>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></p> <p>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b></p> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> <p>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></p> <p>↪ <b>Post warranty maintenance services available</b></p> <p>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></p>	

See footnotes for important warranty information  
 US models announced January 15, 2010 or February 8, 2011  
 US models withdrawn effective April 2011 or July 2011

Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5554-A1U	4x4	Core i3-550	3.20	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	None	Pro 32	G P	Dec 10

- **The most powerful, stable, and manageable desktop with next generation Intel platform**
- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Core™ i3 Processor i3-550 with dual-core,</b>                      Intel 64, Intel Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache                      Processor in LGA1156 socket</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation											
Memory	<p><b>2GB std,</b> 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3,</b> four 240-pin DIMM sockets;  <i>Non-italics:</i> standard memory in one socket; three sockets available</p>										
Graphics	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p>										
DP dongle	None										
SATA disk	<p><b>250GB,</b> SATA 3.0Gb/s 7200 rpm                      Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive                      Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical</p>										
SATA DVD±RW											
SATA Controller											
eSATA port	None										
Diskette drive	None										
Media reader	None										
Chipset	<p><b>Intel Q57 Express Chipset,</b> Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O</p>										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32					<b>Accessories</b>					
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>					<ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397</li> <li>More accessories on O-M90 sheet</li> </ul> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>					
<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>											
<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>											
<p>Supports ThinkVantage® technologies</p>											
<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>											

See footnotes for important warranty information  
 US model announced November 30, 2010  
 US model withdrawn effective July 2011


# ThinkCentre® M90p Eco Ultra Small (3257) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
3257-A1U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10
3257-A2U	1x2	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10

- **Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty!**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)


Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with <b>dual-core</b> , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache	<b>Eco Ultra Small</b>	
Implementation	Processor in LGA1156 socket		
Memory	<b>3GB std</b> , 8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook); <i>Italics: standard memory in both sockets; no sockets available</i>	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later	Slot 1: Low Profile, 32-bit PCI 2.3	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle	None		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<b>500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Express Q57 Chipset</b> , Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 ThinkCentre Ultra Small Under Desk Mount 40Y8625 More accessories on O-M90 sheet		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD±RW)			

See footnotes for important warranty information  
US models announced January 15, 2010  
US models withdrawn effective February or October 2010

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>s</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3257-A5U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Mar 10
3257-A9U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Dec 10

- Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		<p><b>Eco Ultra Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation	Processor in LGA1156 socket		
Memory	<b>3GB std</b> , 8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook); <i>Italics: standard memory in both sockets; no sockets available</i>		
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 1277MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		
DP dongle	None		
SATA disk	<b>500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
- <i>Some:</i> Genuine Windows 7 Professional 64	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
	DisplayPort to Single-link DVI-D Cable	45J7915	
	DisplayPort to VGA Monitor Cable	57Y4393	
	Lenovo Vertical PC and Monitor Stand II	41R4474	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	More accessories on O-M90 sheet		
• Rescue and Recovery™	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• ThinkVantage System Update	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
<b>Security</b>			
<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>			
<b>Environmental Features</b>			
<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>			
Supports ThinkVantage® technologies			
<b>Limited Warranty<sup>1</sup></b>			
<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>			


See footnotes for important warranty information  
US models announced March 2 or November 30, 2010  
US models withdrawn effective November 2011



Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory*	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro Preload	Recovery DVD	Global Educ	Avail date
3853-A1U	1x2	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
3853-A2U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
3853-A3U	1x2	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10

- Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- These models have a 3-year limited warranty<sup>1</sup>

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		<b>Eco Ultra Small</b> 
Implementation	Processor in LGA1156 socket		
Memory	<b>2GB or 3GB std.</b> , 8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> <b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
DP dongle	None		
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (iAMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 Lenovo Vertical PC and Monitor Stand II 41R4474 ThinkCentre Ultra Small Under Desk Mount 40Y8625 More accessories on O-M90 sheet		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD±RW)			
		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective October 2010

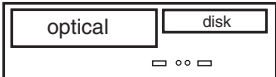
# ThinkCentre® M90p Eco Ultra Small (3853) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3853-A4U	1x2	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
3853-B5U	1x2	Core i5-660	3.33	3.60	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
3853-E3U	1x2	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
3853-E4U	1x2	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
3853-E5U	1x2	Core i5-660	3.33	3.60	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10

- **Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise	<b>Eco Ultra Small</b> 
Implementation	Processor in LGA1156 socket	
Memory	<b>2GB or 3GB std.</b> , 8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [ <i>2GB models</i> ], 1277MB [ <i>3GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk  Slot 1: Low Profile, 32-bit PCI 2.3 <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 11.0" W X 9.4" D X 3.1" H</li> <li>• 279mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> <li>• System floor stand for vertical orientation</li> </ul>
DP dongle	None	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm	<b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	Supports ThinkVantage® technologies
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical	
eSATA port	None	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm) <sup>4</sup>	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®	
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® 7 Professional 32	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
• Rescue and Recovery™	DisplayPort to Single-link DVI-D Cable 45J7915	
• ThinkVantage System Update	DisplayPort to VGA Monitor Cable 57Y4393	
• ThinkVantage Power Manager	Lenovo Vertical PC and Monitor Stand II 41R4474	
• ThinkVantage Toolbox	More accessories on O-M90 sheet	
• Norton™ Internet Security 2011 (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Adobe® Reader®	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Adobe Flash® Player		
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Corel® Burn.Now™ (DVD±RW)		
• Corel DVD MovieFactory® (DVD±RW)		


See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective April 2010 or November 2011

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Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Turbo Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5296-A1U	1x2	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	G P	Feb 10

- Next generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ i5 Processor i5-650</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket		<b>Eco Ultra Small</b> 
Implementation	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slot 1: Low Profile, 32-bit PCI 2.3		
Memory	<b>2GB std</b> , 8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		
DP dongle	None		<b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> Supports ThinkVantage® technologies
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA Controller Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical		
eSATA port	None		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 87% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>Lenovo Vertical PC and Monitor Stand II 41R4474</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

See footnotes for important warranty information  
 US model announced January 15, 2010  
 US model withdrawn effective November 2011

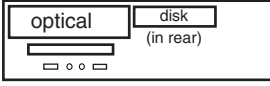
# ThinkCentre® M90p Small (3269) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro Preload	Recovery DVD	Global Educ	Avail date
3269-A1U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB <sup>b</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
3269-A2U	2x3	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with <b>dual-core</b> , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	<b>Small</b>	
Implementation			
Memory	<b>3GB std</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Italics: standard memory in two sockets; two sockets available;</i>	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express 2.0 x16 (75w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	None		
SATA disk	<b>500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction		
			<b>Security</b>
			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
			<b>Environmental Features</b>
			<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
			Supports ThinkVantage® technologies
			<b>Limited Warranty<sup>1</sup></b>
			<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>	
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)		1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397 NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396 More accessories on O-M90 sheet	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD±RW)			

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective February or October 2010

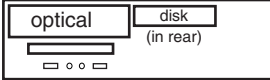
# ThinkCentre® M90p Small (3269) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3269-A6U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Mar 10
3269-B5U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Dec 10
3269-A8U	2x3	Core i5-650	3.20	3.46	2	4GB	320GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Mar 10
3269-B1U	2x3	Core i7-870	2.93	3.60	4	4GB	500GB	DVD±RW	<b>310</b>	VGA, DP	ES50	vPro	Pro 64	None	Oct 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ i5 Processor i5-650 with dual-core,</b> Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or</p> <p><b>Intel Core i7 Processor i7-870 with quad-core,</b> Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache</p> <p>Processor in LGA1156 socket</p>	<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express 2.0 x16 (45w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>																		
Implementation	Processor in LGA1156 socket																			
Memory	<p><b>3GB or 4GB std,</b> 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3,</b> four 240-pin DIMM sockets;</p> <p><i>Italics: standard memory in two sockets; two sockets available</i></p>																			
Graphics	<p><i>Some:</i> <b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 1277MB[3GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 310,</b> PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts</p>																			
DP dongle	None	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>																		
SATA disk	<b>320GB or 500GB,</b> SATA 3.0Gb/s 7200 rpm																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical																			
eSATA port	None																			
Diskette drive	None																			
Media reader	None																			
Chipset	<b>Intel Q57 Express Chipset,</b> Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio																			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®																			
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)																			
Modem	None																			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p>																		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																			
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction																			
<b>Preloaded operating system<sup>20</sup></b>	<p>- <i>Some:</i> Genuine Windows® 7 Professional 32</p> <p>- <i>Some:</i> Genuine Windows 7 Professional 64</p>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30-day)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>NVIDIA® GeForce® 512MB 310 (DP, VGA)</td> <td>57Y4397</td> </tr> <tr> <td>NVIDIA Quadro® 512MB FX380 LP (DP, DVI)</td> <td>57Y4396</td> </tr> </table> <p>More accessories on O-M90 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397	NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396
1GB PC3-10600 DDR3 UDIMM	57Y4389																			
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NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396																			

See footnotes for important warranty information  
 US models announced March 2, September 28, or November 30, 2010  
 US models withdrawn effective July 2011

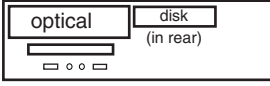
# ThinkCentre® M90p Small (5536) - XP with Win7 License - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory*	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Preload	Recovery DVD	Global Educ	Avail date
5536-A1U	2x3	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10
5536-A2U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10
5536-A3U	2x3	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10
5536-E1U	2x3	Core i5-660	3.33	3.60	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	XP Pro	Pro 32	None	Feb 10

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- These models have a 3-year limited warranty<sup>1</sup>

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	<b>Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB or 3GB std</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available	Slot 1: Low Profile, PCI Express 2.0 x16 (75w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	None		
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, two SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397 NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396 More accessories on O-M90 sheet		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• Lenovo System Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
• Corel WinDVD® (DVD±RW)			
		<b>Security</b>	
		<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
		<b>Environmental Features</b>	
		<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>	
		Supports ThinkVantage® technologies	
		<b>Limited Warranty<sup>1</sup></b>	
		<ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	

See footnotes for important warranty information  
US models announced January 15, 2010  
US models withdrawn effective October 2010

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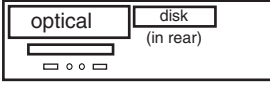
# ThinkCentre® M90p Small (5536) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
5536-A4U	2x3	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
5536-B8U	2x3	Core i5-650	3.20	3.46	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
5536-B9U	2x3	Core i5-660	3.33	3.60	2	3GB	500GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10
5536-E2U	2x3	Core i5-660	3.33	3.60	2	2GB	250GB	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with <b>dual-core</b> , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket		<b>Small</b>	
Implementation	Processor in LGA1156 socket		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Memory	<b>2GB or 3GB std</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available		Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [ <i>2GB models</i> ], 1277MB [ <i>3GB models</i> ]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
DP dongle	None			
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®			
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32			
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>DisplayPort to VGA Monitor Cable 57Y4393</li> <li>NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397</li> <li>NVIDIA Quadro® 512MB FX380 LP (DP, DVI) 57Y4396</li> <li>More accessories on O-M90 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>			
				<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
US models announced January 15, 2010  
US models withdrawn effective July 2011

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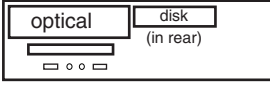
# ThinkCentre® M90p Small (5864) - GMP (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>3</sup>	SATA disk	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5864-A1U	2x3	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	G P	Feb 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**
- **This system is Microsoft® Office 2010 Product Key Ready (O10PKR)**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		<b>Small</b>	
Implementation	Processor in LGA1156 socket			
Memory	<b>2GB std</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, 32-bit PCI 2.3	
DP dongle	None		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless system board retention</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1, two SATA connectors for disk and optical			
eSATA port	None			
Diskette drive	None		<p style="text-align: center;"><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>	
Media reader	None			
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		<p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®			
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	240 watts with 85% efficiency, auto-sensing, active Power Factor Correction			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® 7 Professional 32	1GB PC3-10600 DDR3 UDIMM	57Y4389		
	2GB PC3-10600 DDR3 UDIMM	57Y4390		
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
• Rescue and Recovery™	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		
• Password Manager	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
• ThinkVantage System Update	DisplayPort to Single-link DVI-D Cable	45J7915		
• ThinkVantage Power Manager	DisplayPort to VGA Monitor Cable	57Y4393		
• ThinkVantage Toolbox	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397		
• Norton™ Internet Security 2011 (30 days of virus definitions)	NVIDIA Quadro® 512MB FX380 LP (DP, DVI)	57Y4396		
• Adobe® Reader®	More accessories on O-M90 sheet			
• Adobe Flash® Player	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Skype™ for Windows	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				

See footnotes for important warranty information  
 US model announced January 15, 2010  
 US model withdrawn effective July 2011

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 (MELB1-11) July 2010



# ThinkCentre® M90p Tower (3282) - TopSeller (XP) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro Preload	Recovery DVD	Global Educ	Avail date
3282-A1U	4x4	Core i5-650	3.20	3.46	2	3GB	500GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
3282-A2U	4x4	Core i5-660	3.33	3.60	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i>  <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with <b>dual-core</b>, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																					
Implementation	Processor in LGA1156 socket																															
Memory	<p><b>3GB std</b>, 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available</p>																															
Graphics	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10*, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display                      * DirectX 10 is only available with Windows Vista and later</p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk</p>																					
DP dongle	None										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																					
SATA disk	<b>500GB</b> , SATA 3.0Gb/s 7200 rpm																															
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																															
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, three SATA connectors for disk and optical																															
eSATA port	None																															
Diskette drive	None																															
Media reader	None																															
Chipset	<p><b>Intel Q57 Express Chipset</b>                      Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O</p>												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																															
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																															
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																															
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																															
Speaker	Internal speaker for business audio																															
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®																															
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)																															
Modem	None																															
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant												<p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																															
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																															
Power supply	280 watts with variable speed fan, autosensing, 85% PSU																															
<b>Preloaded operating system<sup>20</sup></b>	<p>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)</p>										<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>NVIDIA® GeForce® 512MB 310 (DP, VGA)</td> <td>57Y4397</td> </tr> </table> <p>More accessories on O-M90 sheet                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397	<p>Supports ThinkVantage® technologies</p>			
1GB PC3-10600 DDR3 UDIMM	57Y4389																															
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NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397																															
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo System Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>												<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																			

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective February or October 2010

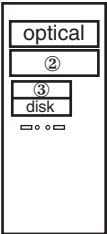
# ThinkCentre® M90p Tower (3282) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global Educ	Avail date
3282-A8U	4x4	Core i5-650	3.20	3.46	2	3GB	500GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Mar 10
3282-B6U	4x4	Core i5-650	3.20	3.46	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Dec 10
3282-B1U	4x4	Core i5-650	3.20	3.46	2	4GB	320GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 64	None	Mar 10
3282-B3U	4x4	Core i7-870	2.93	3.60	4	4GB	500GB	None	DVD±RW	<b>310</b>	VGA, DP	ES50	vPro	Pro 64	None	Oct 10

- **Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology**
- **Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\***
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or <b>Intel Core i7 Processor i7-870</b> with quad-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 8MB cache Processor in LGA1156 socket		<b>Tower</b> • Business black color; metal case • 6.9" W X 17.4" D X 16.3" H • 175mm W X 442mm D X 414mm H • 24.2 lb (11.0 kg) in max configuration • Handle on top front • Power button on top handle • Toolless cover removal • Tilted front I/O for easy access • Toolless disk, optical drive removal • Toolless adapter retention	
Implementation			Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
Memory	<b>3GB or 4GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Italics: standard memory in two sockets; two sockets available</i>		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3	
Graphics	<i>Some: Intel HD Graphics</i> in processor, HDCP, DirectX® 10, uses main memory (up to 1277MB[3GB models] or 1759MB [4GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display <i>Some: NVIDIA® GeForce® 310</i> , PCI Express® 2.0 x16 adapter, 512MB, one analog VGA DB-15 connector, one DisplayPort connector, HDCP, DirectX 10, NVIDIA PureVideo®, NVIDIA CUDA™, 30 watts			
DP dongle	None			
SATA disk	<b>320GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel Q57 Express Chipset</b> , Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®			
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo			
Power supply	280 watts with variable speed fan, autosensing, 85% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- <i>Some:</i> Genuine Windows® 7 Professional 32	1GB PC3-10600 DDR3 UDIMM 57Y4389			
- <i>Some:</i> Genuine Windows 7 Professional 64	2GB PC3-10600 DDR3 UDIMM 57Y4390			
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
	DisplayPort to Single-link DVI-D Cable 45J7915			
	DisplayPort to VGA Monitor Cable 57Y4393			
	NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397			
	More accessories on O-M90 sheet			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Rescue and Recovery™				
• Password Manager				
• ThinkVantage System Update				
• ThinkVantage Power Manager				
• ThinkVantage Toolbox				
• Norton™ Internet Security 2011 (30-day)				
• Adobe® Reader®				
• Adobe Flash® Player				
• Skype™ for Windows				
• Microsoft Office 2010 preloaded; purchase product key to activate				
• Corel® Burn.Now™ (DVD±RW)				
• Corel DVD MovieFactory® (DVD±RW)				
			<b>Security</b>	
			• Security chip (see information on left)	
			• One lock to secure both cover and entire system to fixed object:	
			- Padlock loop (in rear for opt padlock)	
			- Security slot (in rear for optional Kensington® MicroSaver® cable)	
			• Power-on password	
			• Hard disk password	
			• Boot sequence control	
			• Boot without keyboard and mouse	
			• Serial port I/O control	
			• Individual USB port disablement	
			<b>Environmental Features</b>	
			• EPEAT™ Gold rating	
			• ENERGY STAR® 5.0-compliant	
			• GREENGUARD® certified	
			• RoHS-compliant	
			Supports ThinkVantage® technologies	
			<b>Limited Warranty<sup>1</sup></b>	
			↪ <b>3-year parts and labor</b>	
			↪ <b>International Warranty Service<sup>9</sup></b>	
			↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>	
			↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>	
			• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)	
			• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)	
			• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)	
			• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)	
			• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)	
			↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>	
			↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>	

See footnotes for important warranty information  
US models announced March 2, September 28, or November 30, 2010  
US models withdrawn effective July 2011

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(MELB1-29) July 2011

# ThinkCentre® M90p Tower (5498) - XP with Win7 License - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Recovery DVD	Global Educ	Avail date
5498-A1U	4x4	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
5498-A2U	4x4	Core i5-650	3.20	3.46	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10
5498-A3U	4x4	Core i5-660	3.33	3.60	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro XP Pro	Pro 32	None	Feb 10

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- These models have a 3-year limited warranty<sup>1</sup>

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

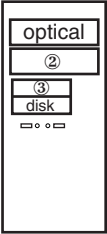
Positioning Processor	Ultimate security, stability, and manageability for the enterprise <b>Intel® Core™ i5 Processor i5-650 or i5-660</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		<b>Tower</b>																	
Implementation	Processor in LGA1156 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																	
Memory	<b>2GB or 3GB std.</b> , 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10**, uses main memory (up to 1GB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display ** DirectX 10 is only available with Windows Vista and later		Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																	
DP dongle	None				<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p><b>Environmental Features</b></p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p>Supports ThinkVantage® technologies</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>															
SATA disk	<b>250GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm																			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																			
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, three SATA connectors for disk and optical																			
eSATA port	None																			
Diskette drive	None																			
Media reader	None																			
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for PCI, ethernet, and USB, SMSC® SCH5147 Super I/O																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																			
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																			
Speaker	Internal speaker for business audio																			
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®																			
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)																			
Modem	None																			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																			
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																			
Power supply	280 watts with variable speed fan, autosenesing, 85% PSU																			
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)</li> </ul>		<b>Accessories</b> <table border="0"> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>DisplayPort to VGA Monitor Cable</td> <td>57Y4393</td> </tr> <tr> <td>NVIDIA® GeForce® 512MB 310 (DP, VGA)</td> <td>57Y4397</td> </tr> </table> More accessories on O-M90 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	DisplayPort to VGA Monitor Cable	57Y4393	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397
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<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo System Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD® (DVD±RW)</li> </ul>																			

See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective October 2010

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 (MELB1-18) October 2010

# ThinkCentre® M90p Tower (5498) - Windows 7 - withdrawn

Personal Systems Reference (PSREF)

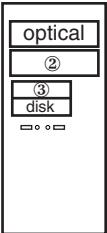
Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0 vPro	Intel vPro	Win7 preload	Global Educ	Avail date								
5498-A4U	4x4	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10								
5498-B5U	4x4	Core i5-660	3.33	3.60	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10								
5498-E7U	4x4	Core i5-650	3.20	3.46	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10								
5498-E8U	4x4	Core i5-660	3.33	3.60	2	3GB	500GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10								
5498-E9U	4x4	Core i5-660	3.33	3.60	2	2GB	250GB	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	None	Feb 10								
<ul style="list-style-type: none"> <li>• <b>Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology</b></li> <li>• <b>Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0*</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> <li>• <b>These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>																								
* For more information on Lenovo Secure Managed Client, see <a href="http://lenovo.com/acc">lenovo.com/acc</a>																								
Positioning	Ultimate security, stability, and manageability for the enterprise										<b>Tower</b>		 <p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> </p> <p>                     Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader/diskette)                      Bay ④ 3.5", 1" high, no access, std disk                 </p> <p>                     Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, 32-bit PCI 2.3                      Slot 4: half-length, full-height, 32-bit PCI 2.3                 </p>											
Processor	Intel® Core™ i5 Processor i5-650 or i5-660 with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache																							
Implementation	Processor in LGA1156 socket																							
Memory	2GB or 3GB std, 16GB max, UDIMM, PC3-10600 1333MHz DDR3, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available																							
Graphics	Intel HD Graphics in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models], 1277MB [3GB models]), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display																							
DP dongle	None																							
SATA disk	250GB or 500GB, SATA 3.0Gb/s 7200 rpm																							
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																							
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical																							
eSATA port	None																							
Diskette drive	None																							
Media reader	None																							
Chipset	Intel Q57 Express Chipset, Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O																							
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																							
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)																							
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																							
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																							
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																							
Speaker	Internal speaker for business audio																							
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®																							
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)																							
Modem	None																							
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant																							
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																							
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo																							
Power supply	280 watts with variable speed fan, autosenesing, 85% PSU																							
<table border="0"> <tr> <td style="vertical-align: top;"> <b>Preloaded operating system<sup>20</sup></b>                      - Genuine Windows® 7 Professional 32                 </td> <td style="vertical-align: top;"> <b>Accessories</b>                      1GB PC3-10600 DDR3 UDIMM 57Y4389                      2GB PC3-10600 DDR3 UDIMM 57Y4390                      500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                      1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918                      Super Multi-Burner DL DVD±RW SATA Drive 41N5620                      DisplayPort to Single-link DVI-D Cable 45J7915                      DisplayPort to VGA Monitor Cable 57Y4393                      NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397                      More accessories on O-M90 sheet                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a> </td> </tr> </table>																	<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 32	<b>Accessories</b> 1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 DisplayPort to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 NVIDIA® GeForce® 512MB 310 (DP, VGA) 57Y4397 More accessories on O-M90 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>						
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See footnotes for important warranty information  
 US models announced January 15, 2010  
 US models withdrawn effective April 2010 or July 2011

Type-model	Slot x bay	Processor	Base GHz	Max Turbo GHz	Cores	Memory*	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor conn	ENERGY STAR 5.0	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
5852-A1U	4x4	Core i5-650	3.20	3.46	2	2GB	250GB <sup>2</sup>	None	DVD±RW	Intel HD	VGA, DP	ES50	vPro	Pro 32	G P	Feb 10

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- Most manageable ThinkCentre ever: supports Lenovo Secure Managed Client version 2.0\*
- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

\* For more information on Lenovo Secure Managed Client, see [lenovo.com/acc](http://lenovo.com/acc)

Positioning Processor	<i>Ultimate security, stability, and manageability for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 with dual-core,</b> Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in LGA1156 socket		
Memory	<b>2GB std,</b> 16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3,</b> four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; three sockets available		
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one analog VGA DB-15 connector, one DisplayPort™ connector, supports dual independent display		
DP dongle	None		
SATA disk	<b>250GB,</b> SATA 3.0Gb/s 7200 rpm		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset, RAID 0/1/10, three SATA connectors for disk and optical		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel Q57 Express Chipset,</b> Platform Controller Hub [PCH] (SATA 3.0Gb/s with RAID 0/1/10 support, PCI, ethernet, and USB), SMSC® SCH5147 Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15, DisplayPort)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82578DM, Wake on LAN®		
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® 7 Professional 32	1GB PC3-10600 DDR3 UDIMM	57Y4389	
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	2GB PC3-10600 DDR3 UDIMM	57Y4390	
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• Password Manager	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• ThinkVantage Power Manager	DisplayPort to Single-link DVI-D Cable	45J7915	
• ThinkVantage Toolbox	DisplayPort to VGA Monitor Cable	57Y4393	
• Norton™ Internet Security 2011 (30 days of virus definitions)	NVIDIA® GeForce® 512MB 310 (DP, VGA)	57Y4397	
• Adobe® Reader®	More accessories on O-M90 sheet		
• Adobe Flash® Player	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• Skype™ for Windows	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			
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	<b>Environmental Features</b> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>		
	Supports ThinkVantage® technologies		
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations)<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
 US model announced January 15, 2010  
 US model withdrawn effective July 2011

**Partial list of accessories supported on ThinkCentre M90 and M90p**

**Memory**

*Eco Ultra Small 3244/3692/5226/3257/3853/5296 use notebook memory:*  
 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 *ann 03/02/10*  
 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 *ann 03/02/10*  
 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 *ann 03/02/10*

*Small 3245/5485/3269/5536/5864, and Tower 3246/5474/3282/5498/5852 use desktop memory:*  
 2GB PC3-10600 DDR3 Low-Halogen UDIMM 57Y4390 *ann 01/12/10*  
 2GB PC3-10600 DDR3 L-H UDIMM (25-Pack) 57Y4420 *ann 01/12/10*  
 4GB PC3-10600 DDR3 UDIMM 0A36527 *ann 04/12/11*

More information at [www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 *ann 09/26/06*  
 Lenovo® Super Multi-Burner SATA Drive 0A65618 *ann 08/23/11*  
 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 *ann 03/31/09*

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*  
 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*  
 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 *ann 08/19/08*

USB 2.0 Portable 320GB Hard Disk 45K1689 *ann 03/17/09*  
 USB 2.0 Portable 500GB Hard Disk 45K1690 *ann 05/26/09*  
 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*  
 eSATA/USB 2.0 Secure 500GB Hard Drive<sup>53</sup> 57Y4400 *ann 01/07/10*  
 Slim USB Portable DVD Burner 0A33988 *ann 06/14/11*  
<sup>53</sup>USB-only attach.

**Graphics**

*Small 3245/5485/3269/5536/5864 support Low Profile:*  
 NVIDIA® Quadro® 256MB NVS 295 (2-DP) 45K1669 *ann 04/21/09*  
 NVIDIA Quadro 512MB FX 380 LP (DP, DVI with a DVI to VGA converter) 57Y4396 *ann 02/02/10*  
 NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*  
 NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles) 57Y4167 *ann 03/02/10*

*Tower 3246/5474/3282/5498/5852 support 75 watts max:*  
 NVIDIA Quadro 256MB NVS 295 (2-DP) 45K1669 *ann 04/21/09*  
 NVIDIA Quadro 512MB NVS450 (4-DP/4-DVI) 57Y4398 *ann 01/19/10*  
 NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*  
 NVIDIA GeForce 310 512MB DMS59 57Y4167 *ann 03/02/10*

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*  
 Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*  
 Ultralim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 *ann 04/05/11*  
 ThinkPad® USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*  
 Lenovo USB Fingerprint Keyboard 73P4730 *ann 02/22/05*  
 Lenovo USB Smartcard Keyboard 51J0155 *ann 03/24/09*  
<sup>52</sup>Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*  
 Lenovo ScrollPoint® Mouse(USB, Optical) 31P7405 *ann 08/27/02*  
 Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*  
 Lenovo Wireless Laser Mouse - Black<sup>52</sup> 45K1696 *ann 11/25/08*  
 Lenovo Wireless Laser Mouse - Red/Black<sup>52</sup> 51J0198 *ann 11/25/08*

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic<sup>60</sup> 57Y4488 *ann 01/07/10*  
<sup>60</sup>Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
 Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
 Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
 USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/02/10*  
<sup>56</sup>Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

Lenovo D186 Wide 18.5" Monitor 2580AB1 *ann 01/12/10*  
 ThinkVision® L1711p 17" Monitor 5047HB2 *ann 10/20/09*  
 ThinkVision L1900p 19" Monitor 4431HE1 *ann 11/11/08*  
 ThinkVision L1951p Wide 19" Monitor 2448HB6 *ann 10/20/09*  
 ThinkVision L2250p Wide 22" Monitor 2572HB6 *ann 10/20/09*  
 ThinkVision L2251p Wide 22" Monitor 2572HD6 *ann 10/20/09*  
 ThinkVision L2251x Wide 22" Monitor 2578HB6 *ann 10/20/09*  
 ThinkVision L2321x Wide 23" Monitor 4014HB6 *ann 06/10/10*  
 ThinkVision L2440p Wide 24" Monitor 4420HB2 *ann 09/17/08*

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

*Eco Ultra Small 3244/3692/3257/3853/5296 support:*  
 Lenovo Vertical PC and Monitor Stand II 41R4474 *ann 01/27/09*

**All:**

Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*  
 DisplayPort™ to Single-link DVI-D Cable 45J7915 *ann 08/05/08*  
 DisplayPort to VGA Monitor Cable 57Y4393 *ann 08/04/09*  
 ThinkVision Soundbar 45K1263 *ann 09/16/08*  
 Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
 Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
 Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
 ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*  
<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M90z with Frame Stand



Lenovo ThinkCentre M90z with Height Adjustable Stand Option 57Y4351 (57Y4351 is not compatible to Multi-touch models)



Tool-Less Back Cover Removal



Handle



Dual Independent Display with Optional Lenovo ThinkVision Monitor

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Blue-tooth	Media reader	Light sensor	PCIe Mini Card 802.11	Stand type	Intel vPro	Global Educ	Win7 preload
3429-A1U	G6950	2.80	2GBx1	23.0" Full HD		320GB <sup>2</sup>					Intel 1000	Frame		None	Pro 32
3429-A2U	i3-530	2.93	2+1GB	23.0" Full HD	2.0M	500GB					Intel 1000	Frame		None	Pro 32
3429-D6U	G6960	2.93	2GBx1	23.0" Full HD	2.0M	320GB					Intel 1000	Frame		None	Pro 64
3429-D3U	i3-550	3.20	2+1GB	23.0" Full HD	2.0M	320GB					Intel 1000	Frame		None	Pro 64
3429-A3U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	500GB					Intel 1000	Frame	vPro	None	Pro 64
3429-E4U	i3-550	3.20	4GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue		Sensor	Intel 1000	Lift		None	Pro 64
3429-E5U	i5-660	3.33	4GBx1	23.0" Full HD	2.0M	500GB			Media	Sensor	Intel 1000	Lift	vPro	None	Pro 64
3429-E6U	G6950	2.80	2GBx1	23.0" Full HD	2.0M	320GB				Sensor	Intel 1000	Lift		None	Pro 64
3429-E9U	i3-550	3.20	4GBx1	23.0" Full HD	2.0M	250GB					Intel 1000	Frame		None	Pro 64

- **Best space saving solution & excellent cable management**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<p><i>All-In-One PC for the enterprise</i>  <b>Intel® Pentium® Processor G6950 or G6960 with dual-core</b>, Intel 64, Virtualization Technology, integrated 1066MHz dual-channel DDR3 memory controller, and 3MB cache or <b>Intel Core™ i3 Processor i3-530 or i3-550 with dual-core</b>, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or <b>Intel Core i5 Processor i5-650 or i5-660 with dual-core</b>, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache                      Processor in LGA1156 socket</p>		<p><b>All-In-One</b>                      All:                      • Business black color                      • Handle in rear                      • Support VESA mount (100mm)                      • Tool-less back cover, disk, optical drive, memory removal</p> <p><i>Model(s) with Frame stand:</i>                      • 22" W X 4.29" D X 17.4" H                      • 560mm W X 109mm D X 443mm H                      • 23.6 lb (10.7 kg) in maximum configuration</p> <p><i>Model(s) with Lift stand:</i>                      • Height Adjustable                      • 22" W X 9.84" D X 17.4" H                      • 560mm W X 250mm D X 443mm H                      • 29.3 lb (13.3 kg) in maximum configuration                      • Tilt -5°-25°</p> <p>All:                      Bay ① 3.5", 1" high, no access, std disk (desktop)                      Bay ② slim, .5" high, access, std optical (notebook)</p>
Implementation			<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p>Supports ThinkVantage® technologies</p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• TCO Certified Edge</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> </li> <li>↪ <b>Lenovo services</b> at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>
Memory	<p><b>2GB, 3GB, or 4GB</b> std, 8GB max<sup>3</sup>, <b>PC3-10600 1333MHz DDR3*</b>, dual-channel capable, two 204-pin SODIMM sockets (notebook)                      * System automatically clocks down for processors with 1066MHz DDR3 memory controller</p>		
Graphics	<p><b>Intel HD Graphics</b> in processor, uses main memory (up to 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), HDCP, DirectX® 10, one DisplayPort™ connector, supports dual independent display</p>		
DP dongle	None		
Widescreen	<p><b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b>, anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector  <i>Some:</i> Ambient Light Sensor</p>		
Light sensor	None		
Multi-touch	None		
Camera	<p><i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch</p>		
SATA disk	<p><b>320GB or 500GB</b>, SATA 3.0Gb/s, 3.5" wide, 7200 rpm</p>		
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high		
eSATA port	None		
Diskette drive	None		
Media reader	<i>Some:</i> Single Slot SD Media Card Reader		
Chipset	<p><b>Intel Q57 Express Chipset</b>                      Platform Controller Hub (PCH) for SATA, ethernet, and USB</p>		
Ports	<p><i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector  <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)                      One PCI Express Mini Card slot                      11b/g/n wireless<sup>13</sup>, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2  <i>Some:</i> Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator                      One gigabit ethernet port, Intel 82578DM                      High Definition (HD) Audio, Realtek® ALC269 codec                      Two internal speakers (2watt x 2)</p>		
PCIe Mini Card	None		
Intel 1000	None		
Bluetooth™	None		
Ethernet	None		
Audio	None		
Speaker	None		
IEEE 1394	None		
Intel AMT	<p><i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0)</p>		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <p>- <i>Some:</i> Genuine Windows® 7 Professional 32 2GB PC3-10600 DDR3 SODIMM 55Y3710                      ThinkCentre M90z Height Adjustable Stand 57Y4351                      More accessories on O-M90Z sheet</p> <p>- <i>Some:</i> Genuine Windows 7 Professional 64 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		

See footnotes for important warranty information  
 US models announced May 11, Nov 30, 2010 or Jan 4, Nov 8, Dec 13, 2011  
 US models withdrawn effective April, November 2011, March, November 2012, or May 2013



Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Stand type	Intel vPro	Win7 preload	Global Educ	Avail date
3650-A1U	i3-530	2.93	2GBx1	23.0" Full HD	None	Intel HD	250GB <sup>2</sup>	DVD±RW	None	Frame	None	Pro 32	None	Jun 10
<ul style="list-style-type: none"> <li>• <b>Best space saving solution &amp; excellent cable management</b></li> <li>• <b>This model has a 1-year limited warranty<sup>1</sup></b></li> <li>• <b>This system is Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>														
Positioning Processor	<i>All-In-One PC for the enterprise</i> <b>Intel® Core™ i3 Processor i3-530</b> with dual-core, Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache								<b>All-In-One</b> <i>All:</i> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Tool-less back cover, disk, optical drive, memory removal</li> </ul>					
Implementation	Processor in LGA1156 socket								<i>Model(s) with Frame stand:</i> <ul style="list-style-type: none"> <li>• 22" W X 4.29" D X 17.4" H</li> <li>• 560mm W X 109mm D X 443mm H</li> <li>• 23.6 lb (10.7 kg) in maximum configuration</li> </ul>					
Memory	<b>2GB</b> std, 8GB max <sup>8</sup> , <b>PC3-10600 1333MHz DDR3</b> , dual-channel capable, two 204-pin SODIMM sockets (notebook)								Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)					
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one DisplayPort™ connector, supports dual independent display								<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> </ul>					
DP dongle	None													
Widescreen	<b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector													
Multi-touch Camera	None													
SATA disk	<b>250GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm								Supports ThinkVantage® technologies					
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high													
eSATA port	None													
Diskette drive Media reader	None													
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for SATA, ethernet, and USB								• EPEAT™ Gold rating • ENERGY STAR® 5.0-compliant • TCO Certified Edge • GREENGUARD® certified • RoHS-compliant					
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express Mini Card slot													
Intel 1000 Bluetooth™ Ethernet Audio Speaker IEEE 1394 Intel AMT Modem Security chip	None None One gigabit ethernet port, Intel 82578DM High Definition (HD) Audio, Realtek® ALC269 codec Two internal speakers (2watt x 2) None None None STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo								<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
Preloaded operating system <sup>20</sup>	- Genuine Windows® 7 Professional 32													
Preloaded applications <sup>5</sup> (only some listed)	• Rescue and Recovery™ • Password Manager • ThinkVantage System Update • ThinkVantage Power Manager • ThinkVantage Toolbox • Lenovo Message Center Plus • Norton™ Internet Security 2011 (30 days of virus definitions) • Adobe® Reader® • Skype™ for Windows • Microsoft Office 2010 preloaded; purchase product key to activate • Corel DVD MovieFactory® (DVD±RW)													
Accessories	2GB PC3-10600 DDR3 SODIMM 55Y3710 ThinkCentre M90z Height Adjustable Stand 57Y4351 More accessories on O-M90Z sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													

See footnotes for important warranty information  
 US model announced May 11, 2010  
 US model withdrawn effective April 2011

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Blue-tooth	Media reader	PCIe Mini Card 802.11	Stand type	Intel vPro	Win7 preload	Global Educ	Avail date
5205-A5U	i3-530	2.93	2GBx1	23.0" Full HD		320GB <sup>2</sup>					Frame		Pro 32	None	Jun 10
5205-H3U	i3-550	3.20	2GBx1	23.0" Full HD	2.0M	320GB				Intel 1000	Frame		Pro 32	None	Mar 11
5205-B1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue	Media	Intel 1000	Lift	vPro	Pro 32	None	Jun 10
5205-B2U	i5-670	3.46	2GBx1	23.0" Full HD	2.0M	320GB	Switch	Blue	Media	Intel 1000	Lift	vPro	Pro 32	None	Jun 10
5205-A6U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	500GB				Intel 1000	Frame	vPro	Pro 64	None	Jun 10
<ul style="list-style-type: none"> <li>• <b>Best space saving solution &amp; excellent cable management</b></li> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> <li>• <b>These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>															
Positioning Processor	<p><i>All-In-One PC for the enterprise</i>  <b>Intel® Core™ i3 Processor i3-530 or i3-550 with dual-core,</b> Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or  <b>Intel Core i5 Processor i5-650 or i5-670 with dual-core,</b> Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache                      Processor in LGA1156 socket</p>									<p><b>All-In-One</b>                      All:                      • Business black color                      • Handle in rear                      • Support VESA mount (100mm)                      • Tool-less back cover, disk, optical drive, memory removal</p> <p><i>Model(s) with Frame stand:</i>                      • 22" W X 4.29" D X 17.4" H                      • 560mm W X 109mm D X 443mm H                      • 23.6 lb (10.7 kg) in maximum configuration</p> <p><i>Model(s) with Lift stand:</i>                      • Height Adjustable                      • 22" W X 9.84" D X 17.4" H                      • 560mm W X 250mm D X 443mm H                      • 29.3 lb (13.3 kg) in maximum configuration                      • Tilt -5°-25°</p> <p>All:                      Bay ① 3.5", 1" high, no access, std disk (desktop)                      Bay ② slim, .5" high, access, std optical (notebook)</p>					
Implementation															
Memory	<p><b>2GB or 4GB</b> std, 8GB max<sup>8</sup>, <b>PC3-10600 1333MHz DDR3</b>, dual-channel capable, two 204-pin SODIMM sockets (notebook)</p>														
Graphics	<p><b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [<i>2GB models</i>], 1759MB [<i>4GB model</i>]), one DisplayPort™ connector, supports dual independent display</p>														
DP dongle	None														
Widescreen	<p><b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b>, anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector</p>														
Multi-touch	None														
Camera	<p>None  <i>Some:</i> Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch</p>									<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>					
SATA disk	<p><b>320GB or 500GB</b>, SATA 3.0Gb/s, 3.5" wide, 7200 rpm</p>														
SATA DVD±RW	<p>DVD burner, SATA 1.5Gb/s, 12.7mm high</p>														
eSATA port	None														
Diskette drive	None														
Media reader	<p><i>Some:</i> Single Slot SD Media Card Reader</p>														
Chipset	<p><b>Intel Q57 Express Chipset</b>                      Platform Controller Hub (PCH) for SATA, ethernet, and USB</p>														
Ports	<p><i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector  <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)                      One PCI Express Mini Card slot  <i>Some:</i> 11b/g/n wireless<sup>13</sup>, PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2  <i>Some:</i> Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator</p>														
PCIe Mini Card	<p>Intel 1000</p>														
Bluetooth™	<p><i>Some:</i> Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator</p>														
Ethernet	<p>One gigabit ethernet port, Intel 82578DM</p>														
Audio	<p>High Definition (HD) Audio, Realtek® ALC269 codec</p>														
Speaker	<p>Two internal speakers (2watt x 2)</p>														
IEEE 1394	None														
Intel AMT	<p><i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0)  <i>Non-vPro model(s):</i> None</p>														
Modem	None														
Security chip	<p>STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant</p>														
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>														
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>														
Power supply	<p>150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified</p>														
<p><b>Preloaded operating system<sup>20</sup></b>                      - <i>Some:</i> Genuine Windows® 7 Professional 32                      - <i>Some:</i> Genuine Windows 7 Professional 64</p>			<p><b>Accessories</b>                      2GB PC3-10600 DDR3 SODIMM 55Y3710                      ThinkCentre M90z Height Adjustable Stand 57Y4351                      More accessories on O-M90Z sheet                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			<p>Supports ThinkVantage® technologies</p> <ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• TCO Certified Edge</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>									
<p><b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)                      • Rescue and Recovery™                      • ThinkVantage System Update                      • ThinkVantage Power Manager                      • ThinkVantage Toolbox                      • Lenovo Message Center Plus                      • Norton™ Internet Security 2011 (30 days of virus definitions)                      • Microsoft Office 2010 preloaded; purchase product key to activate                      • Corel® DVD MovieFactory® (DVD±RW)</p>			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> </li> <li>↪ <b>Lenovo services at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>												


See footnotes for important warranty information  
 US models announced May 11, 2010 or February 8, 2011  
 US models withdrawn effective April 2011, November 2011, November 2012, or May 2013

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Bluetooth	PCIe Mini Card 802.11	Media reader	Stand type	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
2471-A1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB <sup>2</sup>	Switch	None	None	Media	Lift	vPro	Pro32	G P	Jul 10
<ul style="list-style-type: none"> <li>• <b>Best space saving solution &amp; excellent cable management</b></li> <li>• <b>This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty</b></li> <li>• <b>This system is Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>															
Positioning Processor	<i>All-In-One PC for the enterprise</i> <b>Intel® Core™ Processor i5-650</b> with dual-core, Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket									<b>All-In-One</b> All: • Business black color • Handle in rear • Support VESA mount (100mm) • Tool-less back cover, disk, optical drive, memory removal					
Implementation	Processor in LGA1156 socket									<b>Model(s) with Lift stand:</b> • Height Adjustable • 22" W X 9.84" D X 17.4" H • 560mm W X 250mm D X 443mm H • 29.3 lb (13.3 kg) in maximum configuration • Tilt -5°-25°					
Memory	<b>2GB</b> std, 8GB max <sup>8</sup> , <b>PC3-10600 1333MHz DDR3</b> , dual-channel capable, two 204-pin SODIMM sockets (notebook)									Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)					
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one DisplayPort™ connector, supports dual independent display									<b>Security</b> • Security chip (see information left) • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • Individual USB port disablement • Chassis intrusion switch					
DP dongle	None														
Widescreen	<b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector														
Multi-touch	None														
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off														
SATA disk	<b>320GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm														
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high														
eSATA port	None														
Diskette drive	None														
Media reader	Single Slot SD Media Card Reader														
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for SATA, ethernet, and USB														
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
PCIe Mini Card	One PCI Express Mini Card slot														
Intel 1000	None														
Bluetooth™	None														
Ethernet	One gigabit ethernet port, Intel 82578DM														
Audio	High Definition (HD) Audio, Realtek® ALC269 codec														
Speaker	Two internal speakers (2watt x 2)														
IEEE 1394	None														
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)														
Modem	None														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo														
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified									Supports ThinkVantage® technologies					
<b>Preloaded operating system</b> <sup>20</sup>			<b>Accessories</b>												
- Genuine Windows® 7 Professional 32			2GB PC3-10600 DDR3 SODIMM			55Y3710									
<b>Preloaded applications</b> <sup>5</sup> (only some listed)			More accessories on O-M90Z sheet												
<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Lenovo Message Center Plus</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>			Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												
<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> ⇨ <b>Lenovo services at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b>															

See footnotes for important warranty information  
 US model announced June 15, 2010  
 US model withdrawn effective November 2012

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	SATA optical	PCIe Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global Educ	Avail date
0870-A3U	i3-530	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD	320GB <sup>2</sup>	DVD±RW	Intel 1000			Pro 32	None	Jun 10
0870-A4U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000	Media	vPro	Pro 32	None	Jun 10
0870-A6U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD	500GB	DVD±RW	Intel 1000		vPro	Pro 64	None	Dec 10

- **Best space saving solution & excellent cable management**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**


Positioning Processor	<i>All-In-One PC for the enterprise</i> <b>Intel® Core™ i3 Processor i3-530 with dual-core</b> , Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache or <b>Intel Core i5 Processor i5-650 with dual-core</b> , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	<b>All-In-One</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 22" W X 4.57" D X 17.4" H</li> <li>• 560mm W X 116mm D X 443mm H</li> <li>• 25.3 lb (11.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Tool-less back cover, disk, optical drive, memory removal</li> <li>• Frame stand</li> </ul> Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)
Implementation		
Memory	<b>2GB</b> or <b>4GB</b> std, 8GB max <sup>8</sup> , <b>PC3-10600 1333MHz DDR3</b> , dual-channel capable, two 204-pin SODIMM sockets (notebook)	
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models] or 1759MB [4GB models]), one DisplayPort™ connector, supports dual independent display	
DP dongle	None	
Widescreen	<b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector	
Multi-touch	Supports Multi-touch function	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off	
SATA disk	<b>320GB</b> or <b>500GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high	
eSATA port	None	
Diskette drive	None	
Media reader	<i>Some</i> : Single Slot SD Media Card Reader	
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for SATA, ethernet, and USB	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> </ul>
Ports	<i>Rear</i> : four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side</i> : two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
PCIe Mini Card	One PCI Express Mini Card slot	
Intel 1000	11b/g/n wireless <sup>13</sup> , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
Bluetooth™	None	
Ethernet	One gigabit ethernet port, Intel 82578DM	
Audio	High Definition (HD) Audio, Realtek® ALC269 codec	
Speaker	Two internal speakers (2watt x 2)	
IEEE 1394	None	
Intel AMT	<i>vPro model(s)</i> : Intel Active Management Technology 6.0 (Intel AMT 6.0) <i>Non-vPro model(s)</i> : None	Supports ThinkVantage® technologies
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• TCO Certified Edge</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified	

<b>Preloaded operating system<sup>20</sup></b> - <i>Some</i> : Genuine Windows® 7 Professional 32 - <i>Some</i> : Genuine Windows 7 Professional 64  <b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Lenovo Message Center Plus</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	<b>Accessories</b> 2GB PC3-10600 DDR3 SODIMM 55Y3710 More accessories on O-M90Z sheet  Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<b>Limited Warranty<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> ⇨ <b>Lenovo services at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b>
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See footnotes for important warranty information  
 US models announced May 11 or November 30, 2010  
 US models withdrawn effective April 2011 or November 2012

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	Chassis intr switch	Blue-tooth	PCIe Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global Educ	Avail date
0800-A2U	i5-650	3.20	2GBx2	23.0" Full HD	2.0M	Intel HD 500GB <sup>2</sup>		Switch	Blue	Intel 1000	Media	vPro	Pro32	None	Jun 10
0800-A5U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB		Switch	Blue	Intel 1000	Media	vPro	Pro32	None	Jun 10
0800-A6U	i5-670	3.46	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB		Switch	Blue	Intel 1000	Media	vPro	Pro32	None	Jun 10
0800-D4U	i3-530	2.93	2GBx1	23.0" Full HD	2.0M	Intel HD 320GB				Intel 1000			Pro32	None	Jun 10

- **Best space saving solution & excellent cable management**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>All-In-One PC for the enterprise</i> <b>Intel® Core™ i3 Processor i3-530 with dual-core,</b> Intel 64, Hyper-Threading Technology, Virtualization Technology, integrated 1333MHz dual-channel DDR3 memory controller, 4MB cache or <b>Intel Core i5 Processor i5-650 or i5-670 with dual-core,</b> Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket	<b>All-In-One</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 22" W X 4.57" D X 17.4" H</li> <li>• 560mm W X 116mm D X 443mm H</li> <li>• 25.3 lb (11.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Tool-less back cover, disk, optical drive, memory removal</li> <li>• Frame stand</li> </ul>
Implementation		
Memory	<b>2GB or 4GB</b> std, 8GB max <sup>8</sup> , <b>PC3-10600 1333MHz DDR3</b> , dual-channel capable, two 204-pin SODIMM sockets (notebook)	Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB [2GB models], 1759MB [4GB model]), one DisplayPort™ connector, supports dual independent display	
DP dongle	None	
Widescreen	<b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector	
Multi-touch	Supports Multi-touch function	
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical on/off switch	
SATA disk	<b>320GB or 500GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high	
eSATA port	None	
Diskette drive	None	
Media reader	<i>Some:</i> Single Slot SD Media Card Reader	
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for SATA, ethernet, and USB	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	Supports ThinkVantage® technologies
PCIe Mini Card	One PCI Express Mini Card slot	<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• TCO Certified Edge</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>
Intel 1000	11b/g/n wireless <sup>13</sup> , PCIe Half Mini Card, Intel Centrino® Wireless-N 1000, 1x2	
Bluetooth™	<i>Some:</i> Bluetooth 2.1 wireless, Broadcom® BCM2070, LED indicator	
Ethernet	One gigabit ethernet port, Intel 82578DM	
Audio	High Definition (HD) Audio, Realtek® ALC269 codec	
Speaker	Two internal speakers (2watt x 2)	
IEEE 1394	None	
Intel AMT	<i>vPro model(s):</i> Intel Active Management Technology 6.0 (Intel AMT 6.0) <i>Non-vPro model(s):</i> None	
Modem	None	
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified	

<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 32	<b>Accessories</b> 2GB PC3-10600 DDR3 SODIMM 55Y3710 More accessories on O-M90Z sheet	<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> </li> <li>↪ <b>Lenovo services at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>
<b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Lenovo Message Center Plus</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
 US models announced May 11, 2010  
 US models withdrawn effective April, 2011, November 2011, or November 2012

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	SATA disk	Chassis intr switch	Bluetooth	PCIe Mini Card 802.11	Media reader	Intel vPro	Win7 preload	Global (G) GMP (P)	Avail date
0852-A1U	i5-650	3.20	2GBx1	23.0" Full HD	2.0M	320GB <sup>2</sup>	Switch	None	None	Media	vPro	Pro 32	G P	Jul 10
<ul style="list-style-type: none"> <li>• <b>Best space saving solution &amp; excellent cable management</b></li> <li>• <b>This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty</b></li> <li>• <b>This system is Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>														
Positioning Processor	<i>All-In-One PC for the enterprise</i> <b>Intel® Core™ i5 Processor i5-650 with dual-core</b> , Intel 64, Hyper-Threading Technology, Turbo Boost Technology, Virtualization Technology, TXT, integrated 1333MHz dual-channel DDR3 memory controller, and 4MB cache Processor in LGA1156 socket									<b>All-In-One</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 22" W X 4.57" D X 17.4" H</li> <li>• 560mm W X 116mm D X 443mm H</li> <li>• 25.3 lb (11.5 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Tool-less back cover, disk, optical drive, memory removal</li> <li>• Frame stand</li> </ul>				
Implementation										Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)				
Memory	<b>2GB</b> std, 8GB max <sup>8</sup> , <b>PC3-10600 1333MHz DDR3</b> , dual-channel capable, two 204-pin SODIMM sockets (notebook)													
Graphics	<b>Intel HD Graphics</b> in processor, HDCP, DirectX® 10, uses main memory (up to 765MB), one DisplayPort™ connector, supports dual independent display													
DP dongle	None													
Widescreen	<b>23.0"</b> (584.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , anti-glare, CCFL backlight, 250 nits, 16:9 aspect ratio, 1000:1 dynamic contrast ratio, work as standalone monitor via VGA-in connector													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator, physical switch on/off													
SATA disk	<b>320GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm DVD burner, SATA 1.5Gb/s, 12.7mm high													
SATA DVD±RW	None													
eSATA port	None													
Diskette drive	None													
Media reader	Single Slot SD Media Card Reader													
Chipset	<b>Intel Q57 Express Chipset</b> Platform Controller Hub (PCH) for SATA, ethernet, and USB													
Ports	<i>Rear:</i> four USB 2.0, ethernet (RJ-45), DisplayPort, VGA-in connector <i>Side:</i> two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	One PCI Express Mini Card slot													
Intel 1000 Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82578DM													
Audio	High Definition (HD) Audio, Realtek® ALC269 codec													
Speaker	Two internal speakers (2watt x 2)													
IEEE 1394	None													
Intel AMT	Intel Active Management Technology 6.0 (Intel AMT 6.0)													
Modem	None													
Security chip	STMicronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU, 80 PLUS® Bronze qualified													
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32													
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Lenovo Message Center Plus</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>													
<b>Accessories</b>	2GB PC3-10600 DDR3 SODIMM More accessories on O-M90Z sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>													
	55Y3710													
<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• Individual USB port disablement</li> <li>• Chassis intrusion switch</li> </ul>														
Supports ThinkVantage® technologies														
<ul style="list-style-type: none"> <li>• EPEAT™ Gold rating</li> <li>• ENERGY STAR® 5.0-compliant</li> <li>• TCO Certified Edge</li> <li>• GREENGUARD® certified</li> <li>• RoHS-compliant</li> </ul>														
<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (Lenovo part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (Lenovo part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (Lenovo part number 41C9196)</li> </ul> </li> <li>↪ <b>Lenovo services at <a href="http://www.lenovo.com/services_warranty/us/en/index.html">www.lenovo.com/services_warranty/us/en/index.html</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>														



See footnotes for important warranty information  
 US model announced June 15, 2010  
 US model withdrawn effective November 2012

**Memory**

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5"	43R2031	ann 03/31/09

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones with mic	57Y4488	ann 01/07/10
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Stand**

ThinkCentre M90z Height Adjustable Stand <sup>59</sup>	57Y4351	ann 05/04/10
ThinkCentre Extend Arm <sup>57</sup>	57Y4352	ann 07/06/10

<sup>57</sup> Compatible when ThinkCentre Extend Arm is desk (clamp) mounted only, wall mount is not supported.

<sup>59</sup> Not compatible to Multi-touch models.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) <sup>68</sup>	5047HB2	ann 10/20/09
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D) <sup>68</sup>	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D) <sup>69</sup>	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D) <sup>69</sup>	4420MB2	ann 09/13/11

<sup>68</sup> Requires a DisplayPort Monitor Cable (DisplayPort to Single-Link DVI-D or DisplayPort to VGA Analog).

<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort P Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
DisplayPort™ to Single-link DVI-D Cable	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable	57Y4393	ann 08/04/09
DisplayPort to DisplayPort Monitor Cable	0A36537	ann 09/13/11
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre M91p  
Small and Tower



Lenovo ThinkCentre M91p Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Small



Lenovo ThinkCentre M91p Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre M91p Tower



Lenovo ThinkCentre M91p Tower

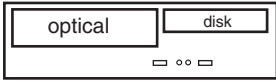


# ThinkCentre® M91 Eco Ultra Small (7519) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7519-B3U	1x2	Core i3-2130	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	N N	Pro 64	12/13/11
7519-B4U	1x2	Core i3-2120	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	N N	Pro 64	02/21/12

- The most powerful, stable, and manageable desktop with next generation Intel platform
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications</b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Core™ i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo® logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk		
Slot	Slot 1: Low Profile, 32-bit PCI 2.3		
			
<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>			
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet			
Limited Warranty	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information  
 US models announced December 13, 2011 or February 21, 2012  
 US models withdrawn effective May 2013

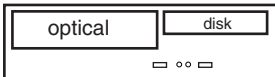
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 (MAST1-20) May 2013

# ThinkCentre® M91 Eco Ultra Small (7516) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7516-C5U	1x2	Core i3-2100	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	G P	Pro 64
7516-E2U	1x2	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	None	G P	Pro 64

- The most powerful, stable, and manageable desktop with next generation Intel platform
- These models are part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										
Implementation	Processor in LGA1155 socket										
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)										
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1										
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	None										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Floor Stand	System floor stand for vertical orientation										
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU										
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk										
Slot	Slot 1: Low Profile, 32-bit PCI 2.3										
											
	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>										
	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>										
	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant										
	Supports ThinkVantage Technologies										
	For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet										
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information  
 US models announced April 12 or December 6, 2011  
 US models withdrawn effective November 2012 or May 2013

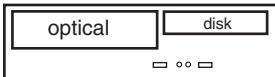
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 (MAST1-11) May 2013

# ThinkCentre® M91p Eco Ultra Small (0266) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-B7U	1x2	Core i5-2400S	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64
0266-B8U	1x2	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications</b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	None		
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 10.8" W X 9.4" D X 3.1" H</li> <li>● 275mm W X 238mm D X 79mm H</li> <li>● 9.2 lb (4.2 kg) in maximum configuration</li> <li>● Hinged toolless cover for easy serviceability</li> <li>● Toolless disk and optical drive removal</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk		
Slot	Slot 1: Low Profile, 32-bit PCI 2.3		
			
<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> </ul>			
EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
Supports ThinkVantage Technologies			
For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet			
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information  
 US models announced April 5, 2011  
 US models withdrawn effective May 2013


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# ThinkCentre® M91p Eco Ultra Small (0266) - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-D1U	1x2	Core i5-2400S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications (only some listed)</b>				
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)							<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	None											
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 10.8" W X 9.4" D X 3.1" H</li> <li>● 275mm W X 238mm D X 79mm H</li> <li>● 9.2 lb (4.2 kg) in maximum configuration</li> <li>● Hinged toolless cover for easy serviceability</li> <li>● Toolless disk and optical drive removal</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk											
Slot	Slot 1: Low Profile, 32-bit PCI 2.3											
								<b>Security</b>				
								<ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> </ul>				
								EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
								For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											

See footnotes for important warranty information  
US model announced April 12, 2011  
US model withdrawn effective May 2013

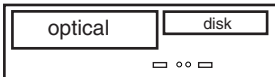
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# ThinkCentre® M91p Eco Ultra Small (0266) - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>8</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
0266-D3U	1x2	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2500S Processor (4 cores / 4 threads)</b> , 2.7GHz, 6MB cache), Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications<sup>20</sup></b> (only some listed)				
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk											
Slot	Slot 1: Low Profile, 32-bit PCI 2.3											
												
								<b>Security</b>				
								<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>				
								EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
US model announced May 24, 2011  
US model withdrawn effective May 2013

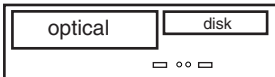
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# ThinkCentre® M91p Eco Ultra Small (5067) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>®</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
5067-A1U	1x2	Core i5-2400S	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<b>Preloaded operating system</b>	
Processor	<b>Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>		Genuine Windows® 7 Professional 32	
Implementation	Processor in LGA1155 socket		<b>Preloaded applications (only some listed)</b>	
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)		<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>	
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>			
DP dongle	None			
Disk	SATA 6.0Gb/s 7200 rpm			
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1			
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar			
eSATA port	None			
Media reader	None			
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	Internal speaker for business audio			
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®			
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)			
Modem	None			
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo			
Floor Stand	None			
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU			
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> </ul>			
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk			
Slot	Slot 1: Low Profile, 32-bit PCI 2.3			
				
			<b>Security</b>	
			<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>	
			EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant	
			Supports ThinkVantage Technologies	
			For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet	
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available			

See footnotes for important warranty information  
US model announced April 5, 2011  
US model withdrawn effective May 2013

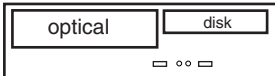
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# ThinkCentre® M91p Eco Ultra Small (5067) - GMP - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
5067-A3U	1x2	Core i5-2400S	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	ES50	vPro	G P	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache), Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications (only some listed)</b>				
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), one SATA 6.0Gb/s connector, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	None											
Power supply	150 watts AC/DC adapter, autosensing, 87% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.4" D X 3.1" H</li> <li>• 275mm W X 238mm D X 79mm H</li> <li>• 9.2 lb (4.2 kg) in maximum configuration</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Toolless disk and optical drive removal</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk							<b>Security</b>				
Slot	Slot 1: Low Profile, 32-bit PCI 2.3							<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>				
								EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
US model announced May 10, 2011  
US model withdrawn effective May 2013

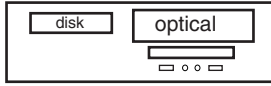
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(MAST1-13) May 2013

# ThinkCentre® M91p Small (4480) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4480-A4U	4x3	Core i5-2400	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-A5U	4x3	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B1U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B3U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4480-B4U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	HD 6450	None	Stand	ES50	vPro	N N	Pro 64
4480-B5U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<i>Some:</i> <b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i> <i>Some:</i> <b>AMD Radeon™ HD 6450</b> , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 1GB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz;</i> works along with Intel HD Graphics to support four independent monitors		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
			
	<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>		
	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced March 1, August 23, or September 6, 2011  
 US models withdrawn effective May 2013

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 (MAST1-7) May 2013

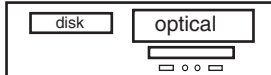


# ThinkCentre® M91p Small (4480) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
4480-B6U	4x3	Core i5-2500	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 32	11/08/11
4480-B7U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 32	11/08/11
4480-B8U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	HD 5450	Switch	Stand	ES50	vPro	N N	Pro 64	11/08/11
4480-B9U	4x3	Core i5-2400	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64	12/13/11
4480-C1U	4x3	Core i5-2500	4GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64	12/13/11
4480-C2U	4x3	Core i7-2600	4GBx1 1333MHz	1TB 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64	02/21/12

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Ultimate security, stability, and manageability for the enterprise</i></p> <p><b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</p> <p>Processor in LGA1155 socket</p>		<p><b>Preloaded operating system<sup>20</sup></b></p> <p>Some: Genuine Windows® 7 Professional 32</p> <p>Some: Genuine Windows 7 Professional 64</p> <p><b>Preloaded applications<sup>14</sup></b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Implementation			
Memory	16GB max <sup>7</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<p>Some: <b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz;</i></p> <p>Some: <b>AMD Radeon™ HD 5450</b>, PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution: 2560x1600 (DisplayPort, DVI-I)@60Hz; 2048x1536@85Hz (VGA via DIV-to-VGA dongle);</i> works along with Intel HD Graphics to support four independent monitors</p>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available		
	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• Some: Chassis intrusion switch</li> </ul> <p>EPEAT™ Gold rating            ENERGY STAR® 5.0-compliant            GREENGUARD® certified            RoHS-compliant</p> <p>Supports ThinkVantage Technologies</p> <p>For compatible accessories, please go to O-M91P sheet;            For Lenovo service upgrade options, please go to S-TC sheet</p>		

See footnotes for important warranty information  
 US models announced November 8, 2011, December 13, 2011, or February 21, 2012  
 US models withdrawn effective May 2013

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 (MAST1-18) May 2013

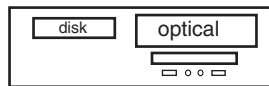
# ThinkCentre® M91p Small (4518) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4518-D6U	4x3	Core i5-2500	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-D7U	4x3	Core i7-2600	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-E4U	4x3	Core i5-2400	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	N N	Pro 64
4518-E5U	4x3	Core i7-2600	4GBx1 1333MHz	500G 7200	DVD±RW	HD 5450	None	Stand	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications</b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<i>Some:</i> <b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz; <i>Some:</i> <b>AMD Radeon™ HD 5450</b> , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536 @85Hz (VGA via DVI-to-VGA dongle); works along with Intel HD Graphics 2000 to support four independent monitors		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	240 watts, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader		
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3		
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		



- Security**
- Security chip (see information on left)
  - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
  - Power-on password
  - Hard disk password
  - Boot sequence control
  - Boot without keyboard and mouse
  - Serial port I/O control
  - Individual USB port disablement

EPEAT™ Gold rating  
 ENERGY STAR® 5.0-compliant  
 GREENGUARD® certified  
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet

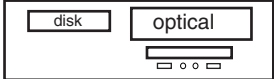
See footnotes for important warranty information  
 US models announced March 1, 2011  
 US models withdrawn effective May 2013

# ThinkCentre® M91p Small (7033) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7033-A1U	4x3	Core i5-2400	2GBx1 1333MHz	250G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>										
Implementation	Processor in LGA1155 socket										
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1										
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Floor Stand	System floor stand for vertical orientation										
Power supply	240 watts, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 13.3" W X 14.5" D X 3.9" H</li> <li>● 337mm W X 369mm D X 99mm H</li> <li>● 16.5 lb (7.5 kg) in maximum configuration</li> <li>● Toolless cover flips up and tilts backward on rear hinges</li> <li>● Toolless disk and optical drive removal</li> <li>● Toolless adapter retention</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader										
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3										
											
<b>Preloaded operating system</b>											
Genuine Windows® 7 Professional 32											
<b>Preloaded applications (only some listed)</b>											
<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>											
<b>Security</b>											
<ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>											
EPEAT™ Gold rating											
ENERGY STAR® 5.0-compliant											
GREENGUARD® certified											
RoHS-compliant											
Supports ThinkVantage Technologies											
For compatible accessories, please go to O-M91P sheet;											
For Lenovo service upgrade options, please go to S-TC sheet											
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information  
 US model announced March 1, 2011  
 US model withdrawn effective May 2013

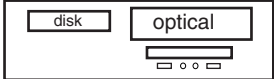
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 (MAST1-8) May 2013

# ThinkCentre® M91p Small (7033) - GMP - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Chassis intr switch	Floor stand	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7033-A2U	4x3	Core i5-2400	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Stand	ES50	vPro	G P	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>											
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>											
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Floor Stand	System floor stand for vertical orientation											
Power supply	240 watts, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.3" W X 14.5" D X 3.9" H</li> <li>• 337mm W X 369mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 3.5", .5" high, access, opt reader											
Slot	Slot 1: Low Profile, PCI Express 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3											
												
	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>											
	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>											
	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant											
	Supports ThinkVantage Technologies											
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available  For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet											

See footnotes for important warranty information  
 US model announced May 10, 2011  
 US model withdrawn effective May 2013

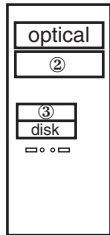
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 (MAST1-14) May 2013

# ThinkCentre® M91p Tower (7052) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
7052-A7U	4x4	Core i5-2400	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-A8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	HD 5450	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> Processor in LGA1155 socket							Genuine Windows® 7 Professional 64  <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Implementation	Processor in LGA1155 socket											
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets											
Graphics	<i>Some: Intel HD Graphics</i> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, VGA) @60Hz; <i>Some: AMD Radeon™ HD 5450</i> , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution:</i> 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536@85Hz (VGA via DVI-to-VGA dongle); works along with Intel HD Graphics 2000 to support four independent monitors											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3							<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul> EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							Supports ThinkVantage Technologies  For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US models announced March 1, 2011  
 US models withdrawn effective May 2013

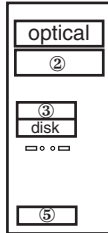
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 (MAST1-4) May 2013

# ThinkCentre® M91p Tower (7052) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
7052-B2U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-B3U	4x5	Core i7-2600	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
7052-B4U	4x5	Core i5-2500	4GBx1 1333MHz	500G 7200	Bay	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										
Processor	<b>Intel® Core™ i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b> <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</b> Processor in LGA1155 socket										
Implementation	Processor in LGA1155 socket										
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>										
DP dongle	None										
Disk	SATA 6.0Gb/s 7200 rpm										
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1										
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar										
eSATA port	None										
Media reader	None										
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)										
Audio	High Definition (HD) Audio, Realtek® ALC662 codec										
Speaker	Internal speaker for business audio										
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®										
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)										
Modem	None										
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo										
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing, 85% PSU										
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>										
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk (some models)										
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3										
											
	<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications (only some listed)</b> <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe® Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>										
	<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>										
	EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant										
	Supports ThinkVantage Technologies										
	For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet										
Limited Warranty <sup>1</sup>	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										

See footnotes for important warranty information

US models announced June 21, August 23, or September 6, 2011

US models withdrawn effective May 2013

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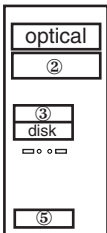
(MAST1-17) May 2013

# ThinkCentre® M91p Tower (7052) - TopSeller - III - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB	2nd Disk rpm	Disk Bay	SATA optical	Graphics	Chassis intr switch	Media reader	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7052-B5U	4x5	Core i5-2400	2GBx1 1333MHz	320G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	11/08/11
7052-B6U	4x5	Core i5-2500	4GBx1 1333MHz	500G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 32	11/08/11
7052-B7U	4x5	Core i7-2600	4GBx1 1333MHz	500G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 32	11/08/11
7052-B8U	4x5	Core i5-2500	4GBx1 1333MHz	500G	7200	Bay	DVD±RW	HD 5450	Switch	None	ES50	vPro	N N	Pro 64	11/08/11
7052-B9U	4x5	Core i7-2600	4GBx1 1333MHz	500G	7200	Bay	DVD±RW	HD 6450	None	Media	ES50	vPro	N N	Pro 64	11/08/11
7052-C2U	4x5	Core i5-2400	4GBx1 1333MHz	250G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11
7052-C3U	4x5	Core i5-2500	4GBx1 1333MHz	250G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11
7052-C4U	4x5	Core i7-2600	4GBx1 1333MHz	250G	7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	12/13/11

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Ultimate security, stability, and manageability for the enterprise											<b>Preloaded operating system<sup>20</sup></b>			
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller											Some: Genuine Windows® 7 Professional 32 Some: Genuine Windows 7 Professional 64 <b>Preloaded applications<sup>14</sup></b> (only some listed)			
Implementation	Processor in LGA1155 socket											<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>			
Memory	16GB max <sup>7</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets														
Graphics	Some: <b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA)@60Hz;</i> Some: <b>AMD Radeon™ HD 5450</b> , PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; works along with Intel HD Graphics to support four independent monitors Some: <b>AMD Radeon HD 6450</b> , PCI Express 2.0 x16 adapter, HDCP, DirectX 11, 1GB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; works along with Intel HD Graphics to support four independent monitors														
Disk	SATA 6.0Gb/s 7200 rpm														
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive														
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1														
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar														
eSATA port	None														
Media reader	Some: 25-in-1 media reader, internal USB 2.0														
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O														
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort														
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)														
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)														
Audio	High Definition (HD) Audio, Realtek® ALC662 codec														
Speaker	Internal speaker for business audio														
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®														
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)														
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant														
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo														
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo														
Power supply	280 watts with variable speed fan, autosensing, 85% PSU														
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>														
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk														
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3														
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														

- Security**
- Security chip (see information on left)
  - Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)
  - Power-on password
  - Hard disk password
  - Boot sequence control
  - Boot without keyboard and mouse
  - Serial port I/O control
  - Individual USB port disablement
  - Some: Chassis intrusion switch

EPEAT™ Gold rating  
 ENERGY STAR® 5.0-compliant  
 GREENGUARD® certified  
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet

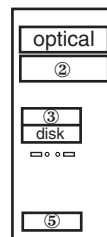
# ThinkCentre® M91p Tower (7052) - TopSeller - IV - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Media reader	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload	Ann date (mm/dd/yy)
7052-C9U	4x5	Core i7-2600	4GBx1 1333MHz	1TB 7200	Bay	DVD±RW	Intel HD	None	None	ES50	vPro	N N	Pro 64	02/21/12

- Next Generation Intel platform with latest Intel vPro Technology and Intel Active Management Technology
- This small and medium business (SMB) model is part of the US TopSeller Program
- This model has a 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>										<b>Preloaded operating system<sup>20</sup></b>			
Processor	<b>Intel® Core™ i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller</b>										Genuine Windows® 7 Professional 64			
Implementation	Processor in LGA1155 socket										<b>Preloaded applications<sup>14</sup></b> (only some listed)			
Memory	16GB max <sup>7</sup> , <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>			
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>													
DP dongle	None													
Disk	SATA 6.0Gb/s 7200 rpm													
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive													
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1													
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar													
eSATA port	None													
Media reader	None													
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®													
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)													
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, autosensing, 85% PSU													
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>													
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk Bay 5: 3.5", 1" high, no access, opt disk										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable)</li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>			
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3										EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant			
										Supports ThinkVantage Technologies				
										For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				
Limited Warranty <sup>12</sup> <b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available														



See footnotes for important warranty information  
 US model announced February 21, 2012  
 US model withdrawn effective May 2013

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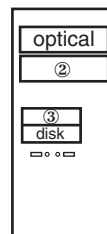
# ThinkCentre® M91p Tower (4524) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global Educ	Win7 preload
4524-A8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
4524-A2U	4x4	Core i5-2400	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 32
4524-C8U	4x4	Core i7-2600	4GBx1 1333MHz	500G 7200	None	DVD±RW	HD 5450	None	ES50	vPro	N N	Pro 64
4524-E1U	4x4	Core i5-2500	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
4524-E3U	4x4	Core i7-2600	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64
4524-A7U	4x4	Core i5-2400	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	N N	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>		<p><b>Preloaded operating system</b></p> <p>Some: Genuine Windows® 7 Professional 32</p> <p>Some: Genuine Windows 7 Professional 64</p> <p><b>Preloaded applications</b> (only some listed)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<p><b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b></p> <p><b>Intel Core i5-2500 Processor (4 cores / 4 threads, 3.3GHz, 6MB cache), Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b></p> <p><b>Intel Core i7-2600 Processor (4 cores / 8 threads, 3.4GHz, 8MB cache), Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b></p>		
Implementation	Processor in LGA1155 socket		
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets		
Graphics	<p>Some: <b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz;</i></p> <p>Some: <b>AMD Radeon™ HD 5450</b>, PCI Express® 2.0 x16 adapter, HDCP, DirectX 11, 512MB, one DVI-I (includes DVI-to-VGA dongle), one DisplayPort, 25 watts; <i>Maximum resolution: 2560x1600 (DisplayPort, DVI-I) @60Hz; 2048x1536 @85Hz (VGA via DVI-to-VGA dongle);</i> works along with Intel HD Graphics 2000 to support four independent monitors</p>		
DP dongle	None		
Disk	SATA 6.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1		
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar		
eSATA port	None		
Media reader	None		
Chipset	<p><b>Intel Q67 Express Chipset</b></p> <p>Platform Controller Hub [PCH] (PCI Express 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O</p>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®		
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)		
Modem	None		
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosensing, 85% PSU		
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Bay	<p>Bay 1: 5.25", 1.6" high, access, std optical</p> <p>Bay 2: 5.25", 1.6" high, access, open</p> <p>Bay 3: 3.5", 1" high, access, opt reader</p> <p>Bay 4: 3.5", 1" high, no access, std disk</p>		
Slot	<p>Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>		
Limited Warranty	<p><b>3-years, limited onsite service</b>, 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available</p>		



- Security**
- Security chip (see information on left)
  - One lock to secure both cover and entire system to fixed object:
    - Padlock loop (in rear for opt padlock)
    - Security slot (in rear for optional Kensington® MicroSaver® cable)
  - Power-on password
  - Hard disk password
  - Boot sequence control
  - Boot without keyboard and mouse
  - Serial port I/O control
  - Individual USB port disablement

EPEAT™ Gold rating  
 ENERGY STAR® 5.0-compliant  
 GREENGUARD® certified  
 RoHS-compliant

Supports ThinkVantage Technologies

For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information  
 US models announced March 1, 2011 or March 6, 2012  
 US models withdrawn effective May 2013

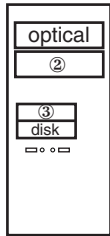
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 (MAST1-2) May 2013

# ThinkCentre® M91p Tower (7034) - GMP - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7034-A1U	4x4	Core i5-2400	2GBx1 1333MHz	250G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	G P	Pro 32

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology							Genuine Windows® 7 Professional 32				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications</b> (only some listed)				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	Intel HD Graphics in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.3" H</li> <li>• 175mm W X 442mm D X 414mm H</li> <li>• 24.2 lb (11.0 kg) in maximum configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Toolless cover removal</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3							<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>				
								EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced March 1, 2011  
 US model withdrawn effective May 2013

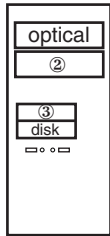
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 (MAST1-5) May 2013

# ThinkCentre® M91p Tower (7034) - GMP - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	ENERGY STAR 5.0	Intel vPro	Global (G) GMP (P)	Win7 preload
7034-A2U	4x4	Core i5-2400	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	ES50	vPro	G P	Pro 64

- Next Generation Intel platform with latest Intel vPro™ Technology and Intel Active Management Technology
- This model is part of the Global Models Plus (GMP) program with limited onsite service 3-year limited warranty
- This system is Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Ultimate security, stability, and manageability for the enterprise</i>							<b>Preloaded operating system</b>				
Processor	<b>Intel® Core™ i5-2400 Processor (4 cores / 4 threads, 3.1GHz, 6MB cache), Turbo Boost 2.0 (3.4GHz), integrated Intel HD Graphics 2000, integrated 1333MHz dual-channel DDR3 memory controller, Virtualization Technology</b>							Genuine Windows® 7 Professional 64				
Implementation	Processor in LGA1155 socket							<b>Preloaded applications (only some listed)</b>				
Memory	16GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , four 240-pin DIMM sockets							<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>				
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DisplayPort™, supports dual independent display; <i>Maximum resolution: 2560x1600 (DisplayPort, VGA) @60Hz</i>											
DP dongle	None											
Disk	SATA 6.0Gb/s 7200 rpm											
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive											
SATA controller	Serial ATA, SATA 3.0Gb/s and SATA 6.0Gb/s, integrated in chipset, RAID 0/1											
SATA cables	Two SATA cables (each 1-drop to device), two SATA 6.0Gb/s connectors, one SATA 3.0Gb/s connector, and one eSATA connector on planar											
eSATA port	None											
Media reader	None											
Chipset	<b>Intel Q67 Express Chipset</b> Platform Controller Hub [PCH] (PCI Express® 2.0 x1, ethernet MAC, PCI, and USB), SMSC® 5627P Super I/O											
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Six USB 2.0, serial (9-pin), ethernet (RJ-45), VGA DB-15, DisplayPort											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)											
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)											
Audio	High Definition (HD) Audio, Realtek® ALC662 codec											
Speaker	Internal speaker for business audio											
Ethernet	One gigabit ethernet port, Intel 82579, Wake on LAN®											
Intel AMT	Intel Active Management Technology 7.1 (Intel AMT 7.1)											
Modem	None											
Security chip	STMicroelectronics ST19NP18 Trusted Platform Module (TPM), TCG 1.2-compliant											
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo											
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan, autosensing, 85% PSU											
Machine	<ul style="list-style-type: none"> <li>● Business black color; metal case</li> <li>● 6.9" W X 17.4" D X 16.3" H</li> <li>● 175mm W X 442mm D X 414mm H</li> <li>● 24.2 lb (11.0 kg) in maximum configuration</li> <li>● Handle on top front</li> <li>● Power button on top handle</li> <li>● Toolless cover removal</li> <li>● Tilted front I/O for easy access</li> <li>● Toolless disk, optical drive removal</li> <li>● Toolless adapter retention</li> </ul>											
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 5.25", 1.6" high, access, open Bay 3: 3.5", 1" high, access, opt reader Bay 4: 3.5", 1" high, no access, std disk											
Slot	Slot 1: half-length, full-height, PCI Express 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3							<b>Security</b> <ul style="list-style-type: none"> <li>● Security chip (see information on left)</li> <li>● One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Serial port I/O control</li> <li>● Individual USB port disablement</li> </ul>				
								EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant				
								Supports ThinkVantage Technologies				
Limited Warranty	<b>3-years, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available							For compatible accessories, please go to O-M91P sheet; For Lenovo service upgrade options, please go to S-TC sheet				

See footnotes for important warranty information  
 US model announced May 10, 2011  
 US model withdrawn effective May 2013

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 (MAST1-15) May 2013

**Memory**

*Eco Ultra Small 0266/5067/7516 use notebook memory:*  
 2GB PC3-10600 DDR3 L-H SODIMM 55Y3710 *ann 03/02/10*  
 2GB PC3-10600 DDR3 L-H SODIMM (25Pack) 57Y4416 *ann 03/02/10*  
 4GB PC3-10600 DDR3 L-H SODIMM 55Y3711 *ann 03/02/10*

*Small 4518/4480/7033, and Tower 4524/7052/7034 use desktop memory:*  
 2GB PC3-10600 DDR3 Low-Halogen UDIMM 57Y4390 *ann 01/12/10*  
 2GB PC3-10600 DDR3 L-H UDIMM (25-Pack) 57Y4420 *ann 01/12/10*  
 4GB PC3-10600 DDR3 UDIMM 0A36527 *ann 04/12/11*

More information at [www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

*All:*  
 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 *ann 09/26/06*  
 Lenovo® Super Multi-Burner SATA Drive 0A65618 *ann 08/23/11*

*Tower 4524/7052/7034 support:*  
 Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675 *ann 03/31/09*

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*  
 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*  
 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 *ann 08/19/08*  
 300GB SATA 3.0Gb/s Disk (10000 rpm) 2.5" 43R2031 *ann 03/31/09*  
 USB 2.0 Portable 320GB Hard Disk 45K1689 *ann 03/17/09*  
 USB 2.0 Portable 500GB Hard Disk 45K1690 *ann 05/26/09*  
 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*  
 USB 3.0 Secure 500GB Hard Drive 0A65619 *ann 11/29/11*  
 USB 3.0 Secure 750GB Hard Drive 0A65616 *ann 11/29/11*  
 USB 3.0 Secure 1TB Hard Drive 0A65621 *ann 08/28/12*  
 Slim USB Portable DVD Burner 0A33988 *ann 06/14/11*

**Graphics**

*Small 4518/4480/7033 support Low Profile:*  
 NVIDIA® Quadro® 256MB NVS 295 (2-DP)<sup>67</sup> 45K1669 *ann 04/21/09*  
 NVIDIA Quadro 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles)<sup>67</sup> 0A36528 *ann 04/26/11*  
 NVIDIA Quadro 512MB 400 (DP, DVI-I with a DVI to VGA converter)<sup>67</sup> 0A36535 *ann 06/28/11*  
 NVIDIA Quadro 1GB 600 (DP, DVI-I with a DVI to VGA converter)<sup>67</sup> 0A36183 *ann 10/26/10*  
 NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)<sup>67</sup> 57Y4167 *ann 03/02/10*  
 AMD 7450 1GB (DP, DVI-I with a DVI to VGA converter)<sup>67</sup> 0A36538 *ann 05/29/12*  
 NVIDIA NVS 510 2GB Graphics Card by Lenovo<sup>67</sup> 0B47077 *ann 01/29/13*  
*Tower 4524/7052/7034 support 75 watts max:*  
 NVIDIA Quadro 256MB NVS 295 (2-DP)<sup>67</sup> 45K1669 *ann 04/21/09*  
 NVIDIA Quadro 512MB NVS 300 DMS59<sup>67</sup> 0A36528 *ann 04/26/11*  
 NVIDIA Quadro 512MB NVS 450 (4-DP or 4-DVI-D via DP to DVI-D cable) 57Y4398 *ann 01/19/10*  
 NVIDIA Quadro 512MB 400 (DP, DVI-I)<sup>67</sup> 0A36535 *ann 06/28/11*  
 NVIDIA Quadro 1GB 600 (DP, DVI-I)<sup>67</sup> 0A36183 *ann 10/26/10*  
 NVIDIA GeForce 310 512MB DMS59<sup>67</sup> 57Y4167 *ann 03/02/10*  
 AMD 7450 1GB (DP, DVI-I)<sup>67</sup> 0A36538 *ann 05/29/12*  
 NVIDIA NVS 510 2GB Graphics Card by Lenovo<sup>67</sup> 0B47077 *ann 01/29/13*

<sup>67</sup> Simultaneously use the graphic card monitor ports along with the systems integrated monitor ports when Multi-Monitor Support is enabled in BIOS Setup.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*  
 Preferred Pro Full Size PS/2 Keyboard 31P7415 *ann 06/04/02*  
 Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*  
 UltraSlim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 *ann 04/05/11*  
 ThinkPad® USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*  
 Lenovo USB Fingerprint Keyboard 73P4730 *ann 02/22/05*  
<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*  
 Lenovo ScrollPoint® Mouse(USB, Optical) 31P7405 *ann 08/27/02*  
 Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*  
 Lenovo Wireless Laser Mouse<sup>52</sup> 0A36188 *ann 12/20/11*  
 ThinkPad USB Laser Mouse 57Y4635 *ann 12/15/09*  
 Lenovo Optical Mouse A6010 55Y6255  
 Lenovo Mini Optical Mouse M20B 55Y2091  
 Lenovo Wireless Mouse N30B 55Y9360

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic<sup>60</sup> 57Y4488 *ann 01/07/10*  
 Lenovo Mini Speakers M220 55Y2033 *ann 01/07/10*  
 Lenovo Headphone P550 55Y2065  
<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
 Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
 Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
 USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*  
<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 *ann 10/20/09*  
 ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)<sup>69</sup> 2448MB6 *ann 09/13/11*  
 ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 *ann 10/20/09*  
 ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 *ann 10/20/09*  
 ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)<sup>69</sup> 2572MB6 *ann 09/13/11*  
 ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)<sup>69</sup> 4420MB2 *ann 09/13/11*  
<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

*Eco Ultra Small 0266/5067 support:*  
 Lenovo Vertical PC and Monitor Stand II 41R4474 *ann 01/27/09*  
*All:*  
 Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*  
 DisplayPort™ to Single-link DVI-D Cable 45J7915 *ann 08/05/08*  
 DisplayPort to VGA Monitor Cable 57Y4393 *ann 08/04/09*  
 DisplayPort to DisplayPort Monitor Cable 0A36537 *ann 09/13/11*  
 Lenovo USB Soundbar 0A36190 *ann 05/01/12*  
 Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
 Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*  
 Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
 ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*  
<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems

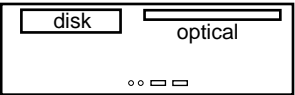
# ThinkCentre® S50 (8086) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Diskette Memory <sup>®</sup>	EIDE drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Workhorse Ethernet	Gbl, Preload Education	Avail date	
S50	8086-A5U	1x2	Celeron® D 330	2.66 256KB	533		256MB	None	40GB <sup>2</sup>	CD	Extreme™ 2	Gigabit	XP Pro <sup>5</sup>	No	Aug 2004	
S50	8086-A3U	1x2	Celeron D 335	2.80 256KB	533		256MB	None	40GB		Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-15U	1x2	Pentium® 4	2.8A 1MB	533		256MB	None	40GB	CD	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-16U	1x2	Pentium 4	2.8A 1MB	533		512MB	None	40GB	CD	Extreme 2	Chip	Gigabit	XP Pro	No	Aug 2004
S50	8086-17U	1x2	Pentium 4	2.8A 1MB	533		512MB	None	40GB		Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-18U	1x2	Pentium 4	2.8E 1MB	800	HT	256MB	None	40GB	CD	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-19U	1x2	Pentium 4	2.8E 1MB	800	HT	512MB	None	40GB	CD	Extreme 2	Chip	Gigabit	XP Pro	No	Aug 2004
S50	8086-21U	1x2	Pentium 4	3.0E 1MB	800	HT	512MB	None	40GB	CD	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-22U	1x2	Pentium 4	3.0E 1MB	800	HT	256MB	None	40GB		Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-24U	1x2	Pentium 4	3.0E 1MB	800	HT	512MB	None	40GB	CD	Extreme 2	Chip	Gigabit	XP Pro	No	Aug 2004
S50	8086-25U	1x2	Pentium 4	3.0E 1MB	800	HT	512MB	None	40GB	Combo	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-32U	1x2	Pentium 4	3.2E 1MB	800	HT	512MB	None	40GB	Combo	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-34U	1x2	Pentium 4	3.2E 1MB	800	HT	512MB	None	40GB	Combo	Extreme 2	Chip	Gigabit	XP Pro	No	Aug 2004
S50	8086-35U	1x2	Pentium 4	3.2E 1MB	800	HT	256MB	None	40GB	CD	Extreme 2	Gigabit	XP Pro	No	Aug 2004	
S50	8086-36U	1x2	Pentium 4	3.2E 1MB	800	HT	512MB	None	40GB	CD	Extreme 2	Gigabit	XP Pro	W G	Aug 2004	

Positioning	<i>Smallest ThinkCentre desktop without compromise</i>	
Processor	<b>Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533MHz system bus or <b>Pentium 4 at 2.8, 3.0 or 3.2GHz</b> with 533 or 800MHz system bus	
Hyper-Threading L2 cache	Some: Hyper-Threading (HT) technology Celeron D: <b>256KB</b> std and max / ECC / full speed Pentium 4: <b>1MB</b> std and max / ECC / full speed	
Implementation	Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>6</sup>	<b>256 or 512MB std</b> / 2GB max	
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used	
Memory - type	533MHz system bus: <b>PC2700 333MHz DDR1</b> (CL2.5); 800MHz system bus: <b>PC3200 400MHz DDR1</b> (CL3); All: non-parity / ind std / unbuffered / dual channel capable	
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector	
EIDE disk	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)	
EIDE cables	Two cables (one 1-drop 80-conductor cable to disk; one 1-drop Ultrabay Enhanced cable to optical) / 2 EIDE connectors on planar	
CD	Some: 24X-10X <sup>4</sup> CD-ROM / EIDE / Ultrabay Enhanced	
Combo	Some: 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE / Ultrabay Enhanced	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5	
SATA cables	No SATA cables / one SATA connector on systemboard	
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive	
Chipset	<b>Intel 865GV chipset</b> / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor	
Ports	<i>Front</i> : two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back</i> : four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Audio connectors	<i>Back</i> : line-in (stereo), line-out (stereo) [all 3.5mm]	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec	
Speaker	One internal speaker for business audio	
Ethernet	10/100/1000 gigabit ethernet on planar / Intel 82541Ei PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2 / Wake on LAN <sup>®</sup>	
Security chip	Some: <b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black	
Cooling fans	Three variable speed fans (front, back, power supply)	
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	533MHz: 128MB PC2700 CL2.5 NP DDR1	31P8854
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 256MB PC2700 CL2.5 NP DDR1	31P8855
	533MHz: 512MB PC2700 CL2.5 NP DDR1	31P8856
<b>Preloaded</b>	533: 1GB PC2700 CL2.5 NP DDR1 UDIMM	31P8857
• Access Program	800MHz: 128MB PC3200 CL3 NP DDR1	22P9271
• Rescue and Recovery™	800MHz: 256MB PC3200 CL3 NP DDR1	73P2685
• Update Connector™ <sup>15</sup>	800MHz: 512MB PC3200 CL3 NP DDR1	73P2686
• Adobe Reader	800: 1GB PC3200 CL3 NP DDR1 UDIMM	22P9272
• Norton AntiVirus (OEM version)	CD-RW/DVD Combo Ultrabay Enhanced	73P3275
• PC-Doctor™ (diagnostics)	Multi-Burner Plus Ultrabay Enhanced Drive	73P3312
• RecordNow and DLA (combo)	160Gb Serial ATA150 Disk (7200 rpm)	09N4254
• InterVideo WinDVD (combo)	120GB IDE Disk ATA-100 (7200 rpm)	09N4249
	USB Portable Diskette Drive	05K9276
	ThinkVision® L151 15" Monitor (black)	9205AB2
	ThinkCentre Ultra Small Under Desk Mount	40Y8625
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

**Ultra Small Form Factor**



Bay ① 3.5", SL 1", access, std disk (desktop)  
Bay ② 5.25", \*slim .5", access, std/opt optical (notebook)  
\* Optical bay is Ultrabay™ Enhanced 12.5mm high (same as used in select ThinkPad notebooks)

Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)

- Up to 75% less space than desktop chassis
- Business black color; metal case
- 10.8" W X 10.8"D X 3.4"H
- 275mm W X 275mm D X 87.5mm H
- With vertical stand: 4.9" W X 10.6"D X 11.7"H
- With vertical stand: 125mm W X 270mm D X 298mm H
- 13.2 to 14.0 lb (6.0 to 6.4 kg)
- Toolless cover flips up and tilts backward on rear hinges
- Toolless disk and optical drive removal
- Bays 1 and 2 flip up (latched and pivoting)
- Toolless PCI slot and riser card retention
- Toolless systemboard retention
- Steel chassis supports 100 lb (45kg) monitor on top
- System stand ships standard for vertical orientation

	<b>SYSTEMS MANAGEMENT</b>
	<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Power Management 1.2</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.1-compliant</li> <li>• DMI 2.0-compliant</li> <li>• <i>Security chip models</i>: Asset ID™<sup>19</sup> (system-specific info in chip)</li> </ul>
	<b>SECURITY</b>
	<ul style="list-style-type: none"> <li>• Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- optional cable locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard or mouse</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• <i>Security chip models</i>: security chip providing C2 tamper switch, Asset ID<sup>19</sup>, and other features</li> </ul>
	<b>LIMITED WARRANTY<sup>1</sup></b>
	<ul style="list-style-type: none"> <li>↔ <b>3 year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>

See footnotes for important warranty information

US models announced July 13, 2004

US models withdrawn effective June or December 2005

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(8086) December 2005

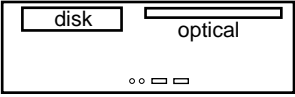
# ThinkCentre® S50 (8086) - November 2004 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus Hyper-Thread	Memory*	Diskette drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Workhorse Ethernet Preload	Gbl, Education	Avail date
S50	8086-AJU	1x2	Celeron® D 330	2.66 256KB	533	512MB	None	40GB <sup>2</sup>	CD	Extreme™ 2	Gigabit XP Pro <sup>5</sup>	<b>Educ</b>	Nov 2004	
S50	8086-AKU	1x2	Celeron D 335	2.80 256KB	533	512MB	None	40GB	CD	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-1AU	1x2	Pentium® 4	2.8A 1MB	533	512MB	None	40GB	DVD	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-ABU	1x2	Pentium 4	2.8A 1MB	533	512MB	None	80GB	Combo	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-2FU	1x2	Pentium 4	3.0E 1MB	800	512MB	None	40GB	DVD	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-2JU	1x2	Pentium 4	3.0E 1MB	800	512MB	None	80GB	Combo	Extreme 2	Gigabit XP Pro	<b>Educ</b>	Nov 2004	
S50	8086-3AU	1x2	Pentium 4	3.2E 1MB	800	512MB	None	40GB	DVD	Extreme 2	Chip	Gigabit XP Pro	No	Nov 2004
S50	8086-3DU	1x2	Pentium 4	3.2E 1MB	800	512MB	None	80GB	Combo	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-42U	1x2	Pentium 4	3.4E 1MB	800	512MB	None	40GB	CD	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-43U	1x2	Pentium 4	3.4E 1MB	800	512MB	None	40GB	CD	Extreme 2	Chip	Gigabit XP Pro	No	Nov 2004
S50	8086-46U	1x2	Pentium 4	3.4E 1MB	800	512MB	None	80GB	Combo	Extreme 2	Gigabit XP Pro	No	Nov 2004	
S50	8086-49U	1x2	Pentium 4	3.4E 1MB	800	512MB	None	80GB	DVD	Extreme 2	Gigabit XP Pro	No	Nov 2004	

Positioning Processor	<i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533MHz system bus or <b>Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz</b> with 533 or 800MHz bus
Hyper-Threading L2 cache	<i>Some:</i> Hyper-Threading (HT) technology <b>Celeron D: 256KB</b> std and max / ECC / full speed <b>Pentium 4: 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket
Memory - std/max <sup>6</sup>	<b>512MB std</b> / 2GB max
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used
Memory - type	<b>533MHz system bus: PC2700 333MHz DDR1</b> (CL2.5); <b>800MHz system bus: PC3200 400MHz DDR1</b> (CL3); <i>All: non-parity / ind std / unbuffered / dual channel capable</i>
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector
EIDE disk	<b>40 or 80GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)
EIDE cables	Two cables (one 1-drop 80-conductor cable to disk; one 1-drop Ultrabay Enhanced cable to optical) / 2 EIDE connectors on planar
CD	<i>Some:</i> 24X-10X <sup>4</sup> CD-ROM / EIDE / Ultrabay Enhanced
DVD	<i>Some:</i> 8X-3.3X Max <sup>4</sup> DVD-ROM / EIDE / Ultrabay Enhanced
Combo	<i>Some:</i> 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE / Ultrabay Enhanced
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5
SATA cables	No SATA cables / one SATA connector on systemboard
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive
Chipset	<b>Intel 865GV chipset</b> / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm]
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec
Speaker	One internal speaker for business audio
Ethernet	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2 / Wake on LAN®
Security chip	<i>Some:</i> <b>Embedded Security Subsystem 2.0</b> <sup>18</sup> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black
Cooling fans	Three variable speed fans (front, back, power supply)
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs

**Ultra Small Form Factor**



Bay ① 3.5", SL 1", access, std disk (desktop)  
Bay ② 5.25", \*slim .5", access, std/opt optical (notebook)  
\* Optical bay is Ultrabay™ Enhanced 12.5mm high (same as used in select ThinkPad notebooks)

Slot 1: half-length (175mm), full-height (225mm), 32-bit PCI 2.3 (5v)

- Up to 75% less space than desktop chassis
- Business black color; metal case
- 10.8" W X 10.8" D X 3.4" H
- 275mm W X 275mm D X 87.5mm H
- With vertical stand: 4.9" W X 10.6" D X 11.7" H
- With vertical stand: 125mm W X 270mm D X 298mm H
- 13.2 to 14.0 lb (6.0 to 6.4 kg)
- Toolless cover flips up and tilts backward on rear hinges
- Toolless disk and optical drive removal
- Bays 1 and 2 flip up (latched and pivoting)
- Toolless PCI slot and riser card retention
- Toolless systemboard retention
- Steel chassis supports 100 lb (45kg) monitor on top
- System stand ships standard for vertical orientation

### SYSTEMS MANAGEMENT

- PC 2001-compliant
- Advanced Power Management 1.2
- Advanced Configuration and Power Interface (ACPI) 2.0b
- SMBIOS 2.3.1-compliant
- DMI 2.0-compliant
- *Security chip models:* Asset ID™<sup>19</sup> (system-specific info in chip)

### SECURITY

- Security slot (in rear for optional Kensington Microsaver cable) - optional cable locks the cover by deactivating the cover release buttons
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard or mouse
- USB, ethernet, SATA, EIDE, serial, parallel enable or disable
- Disk, removable, and network device boot password
- *Security chip models:* security chip providing C2 tamper switch, Asset ID<sup>19</sup>, and other features

### LIMITED WARRANTY<sup>1</sup>

- ⇒ 3 year parts and labor
- ⇒ International Warranty Service<sup>9</sup>
- ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ⇒ ThinkPlus™ services at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)
- ⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup>

Preload with Windows XP Professional <sup>5</sup>	Accessories
Microsoft® Windows® XP Professional with Service Pack 2	533MHz: 128MB PC2700 CL2.5 NP DDR1 31P8854
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 256MB PC2700 CL2.5 NP DDR1 31P8855
	533MHz: 512MB PC2700 CL2.5 NP DDR1 31P8856
	533: 1GB PC2700 CL2.5 NP DDR1 UDIMM 31P8857
<b>Preloaded</b>	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271
• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package from Vital Source Technologies™ software	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685
• Access Program	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686
• Rescue and Recovery™	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272
• Adobe Reader	CD-RW/DVD Combo Ultrabay Enhanced 73P3275
• Norton AntiVirus (OEM version)	Multi-Burner Plus Ultrabay Enhanced Drive 73P3312
• PC-Doctor™ (diagnostics)	160GB Serial ATA150 Disk (7200 rpm) 09N4254
• RecordNow and DLA (combo)	USB Portable Diskette Drive 05K9276
• InterVideo WinDVD (combo, DVD)	USB 2.0 Portable Multi-Burner Drive 22P9163
	ThinkVision® L151 15" Monitor (black) 9205AB2
	ThinkCentre Ultra Small Under Desk Mount 40Y8625
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>

See footnotes for important warranty information  
US models announced November 16, 2004  
US models withdrawn effective June or December 2005

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>6</sup>	Diskette drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Ethernet	Preload	Workhorse Education	Gbl, Avail date
<b>S50</b>	8183-AKU	2x3	Celeron®	2.6	128KB	400		256MB	Diskette	40GB <sup>2</sup>	CD	Extreme™ 2		Gigabit	XP Pro <sup>5</sup>	<b>Educ</b>	Feb 2004
<b>S50</b>	8183-ALU	2x3	Celeron	2.8	128KB	400		256MB	Diskette	40GB	CD	Extreme 2		10/100	XP Pro	No	Feb 2004
<b>S50</b>	8183-BMU	2x3	Pentium® 4	2.8C	512KB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Mar 2004
<b>S50</b>	8183-BNU	2x3	Pentium 4	2.8C	512KB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Mar 2004
<b>S50</b>	8183-BAU	2x3	Pentium 4	2.8E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit	XP Pro	No	Feb 2004
<b>S50</b>	8183-BFU	2x3	Pentium 4	2.8E	1MB	800	HT	256MB	Diskette	40GB	CD	Extreme 2		10/100	XP Pro	No	Feb 2004
<b>S50</b>	8183-D7U	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit	XP Pro	W G	Feb 2004
<b>S50</b>	8183-D9U	2x3	Pentium 4	3.0E	1MB	800	HT	256MB	Diskette	40GB	CD	Extreme 2		10/100	XP Pro	No	Feb 2004
<b>S50</b>	8183-DBU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	CD-RW	Extreme 2		Gigabit	XP Pro	No	Feb 2004
<b>S50</b>	8183-DEU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2	Chip	Gigabit	XP Pro	No	Feb 2004
<b>S50</b>	8183-DGU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Feb 2004
<b>S50</b>	8183-DHU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Feb 2004
<b>S50</b>	8183-G4U	2x3	Pentium 4	3.2	512KB	800	HT	512MB	Diskette	80GB	Combo	Extreme 2		Gigabit	XP Pro	<b>Educ</b>	Feb 2004
<b>S50</b>	8183-BPU	2x3	Pentium 4	2.8A	1MB	533		512MB	Diskette	40GB	CD	Extreme 2		Gigabit	XP Pro	No	Aug 2004
<b>S50</b>	8183-BQU	2x3	Pentium 4	2.8A	1MB	533		256MB	Diskette	40GB	CD	Extreme 2		10/100	XP Pro	No	Aug 2004
<b>S50</b>	8183-DRU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	DVD	Extreme 2		Gigabit	XP Pro	No	Aug 2004

<p><b>Positioning Processor</b> <i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Celeron at 2.4 or 2.6</b> with 400MHz system bus or <b>Pentium 4 at 2.8, 3.0 or 3.2GHz</b> with 533 or 800MHz system bus <i>Some: Hyper-Threading (HT) technology</i> <b>Celeron: 128KB</b> std and max / ECC / full speed <b>Pentium 4: 512KB or 1MB</b> std and max / ECC / full speed <b>Processor and L2 cache</b> in FC-PGA2 in mPGA478B socket</p> <p><b>Hyper-Threading L2 cache</b> <i>Celeron: 128KB</i> std and max / ECC / full speed <i>Pentium 4: 512KB or 1MB</i> std and max / ECC / full speed</p> <p><b>Implementation</b> Processor and L2 cache in FC-PGA2 in mPGA478B socket</p> <p><b>Memory - std/max<sup>6</sup></b> 256 or 512MB std / 2GB max <b>Memory - sockets</b> Two 184-pin gold plated DIMM sockets / one socket used <b>Memory - type</b> <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable</p> <p><b>Graphics</b> <b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</p> <p><b>EIDE disk</b> 40 or 80GB, ATA-100, 7200 rpm, rubber vibration dampening mounts <b>EIDE controller</b> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) <b>EIDE cables</b> One EIDE 80-conductor cable (one 2-drop cable to optical and disk) / one EIDE connector on systemboard <i>Some: 48X-20X<sup>4</sup> CD-ROM / EIDE</i> <b>CD</b> <i>Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE</i> <b>DVD</b> <i>Some: 48X/32X/48X Max<sup>4</sup> CD-RW / EIDE</i> <b>CD-RW</b> <i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i> <b>Combo</b> <i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i> <b>SATA controller</b> Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 <b>SATA cables</b> No SATA cables / two SATA connectors on systemboard <b>Diskette drive</b> <i>Some: 3.5" 1.44MB</i> diskette drive</p> <p><b>Chipset</b> <b>Intel 865G chipset</b> / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMC<sup>®</sup> LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor</p> <p><b>Ports</b> <i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> six USB (Version 2.0), two serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p><b>Audio connectors</b> <i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm]</p> <p><b>Audio</b> Integrated digital audio / SoundMAX<sup>®</sup> Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec</p> <p><b>Speaker</b> One internal speaker for business audio</p> <p><b>Ethernet</b> <i>Some: 10/100</i> ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.2 <i>Some: 10/100/1000</i> gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2</p> <p><b>Security chip</b> <i>Some: Embedded Security Subsystem 2.0<sup>18</sup> / Atmel®</i> chip</p> <p><b>Keyboard</b> 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p> <p><b>Mouse</b> Optical Wheel Mouse (USB only), optical, 400 dpi, black</p> <p><b>Cooling fans</b> Two or three variable speed fans (power supply, fansink, 3.2GHz have third fan)</p> <p><b>Power supply</b> 200 watts with variable speed fan / universal / manual switch</p>	<p><b>Small Form Factor</b></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> </div> <p>Bay ① 3.5", slim .5", access, std or opt diskette Bay ② 5.25", HH 1.6", access, std or opt optical Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case; 9.4 liters</li> <li>• 12.2" W X 14.1"D X 3.3"H</li> <li>• 310mm W X 358mm D X 85mm H</li> <li>• With vertical stand: 5.0" W X 14.6"D X 13.6"H</li> <li>• With vertical stand: 126mm W X 370mm D X 346mm H</li> <li>• 18.0 to 20.0 lb (8.1 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two PCI slots on riser card</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand for vertical orientation</li> </ul>	<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Power Management 1.2</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.1-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Security chip models: Asset ID™.19 (system-specific info in chip)</li> </ul> <p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (for attachment of optional cable lock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Diskette boot inhibit</li> <li>• Boot without keyboard or mouse</li> <li>• Diskette and disk I/O control</li> <li>• Serial/parallel I/O control</li> <li>• Security chip models: security chip providing C2 tamper switch, Asset ID™, keylock on chassis, and other features</li> </ul>	<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3 year parts and labor</li> <li>⇒ International Warranty Service<sup>6</sup></li> <li>⇒ Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>⇒ Onsite service upgrade options via ServicePac<sup>®</sup> at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>
<p><b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)</p> <p><b>Preloaded (only some listed)</b> • Model AKU/DGU/DHU/G4U: contains additional module with a specialized education preload image** • Access IBM and Access Support • Rapid Restore™ Ultra • PC-Doctor™ (diagnostics) • InterVideo WinDVD (combo, DVD models) • RecordNow and DLA (CD-RW, combo)</p>	<p><b>Accessories</b> <i>800MHz:</i> 128MB PC3200 CL3 NP DDR1 22P9271 <i>800MHz:</i> 256MB PC3200 CL3 NP DDR1 73P2685 <i>800MHz:</i> 512MB PC3200 CL3 NP DDR1 73P2686 <i>800:</i> 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus<sup>6</sup> (DVD±RW; internal) 73P3370 ThinkVision L150 15" Monitor (black) 6636AC1 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></p> <p>**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works</p>		

See footnotes for important warranty information  
US models announced February 10, March 30, or August 17, 2004  
US models withdrawn effective January, March, or June 2005

# ThinkCentre™ S50 (8183) - September 2004 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>6</sup>	Diskette drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Ethernet Preload	Workhorse Education	Gbl, Avail	date
S50	8183-61U	2x3	Celeron® D 330	2.66	256K	533	256MB	Diskette	40GB <sup>2</sup>	CD	Extreme™ 2		10/100 XP Pro <sup>5</sup>	No	Oct 04	
S50	8183-62U	2x3	Celeron D 335	2.80	256K	533	256MB	Diskette	40GB	CD	Extreme 2		Gigabit XP Pro	No	Oct 04	
S50	8183-63U	2x3	Celeron D 335	2.80	256K	533	512MB	Diskette	40GB	CD	Extreme 2		Gigabit XP Pro	<b>Educ</b>	Oct 04	
S50	8183-BRU	2x3	Pentium® 4	2.8A	1MB	533	512MB	Diskette	40GB	DVD	Extreme 2		Gigabit XP Pro	No	Oct 04	
S50	8183-BSU	2x3	Pentium 4	2.8A	1MB	533	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit XP Pro	<b>Educ</b>	Oct 04	
S50	8183-GGU	2x3	Pentium 4	3.2E	1MB	800	256MB		40GB	CD	Extreme 2		10/100 XP Pro	No	Oct 04	
S50	8183-GHU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit XP Pro	No	Oct 04
S50	8183-GKU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit XP Pro	No	Oct 04
S50	8183-GLU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit XP Pro	<b>Educ</b>	Oct 04
S50	8183-H2U	2x3	Pentium 4	3.4E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2		Gigabit XP Pro	No	Oct 04
S50	8183-H3U	2x3	Pentium 4	3.4E	1MB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit XP Pro	No	Oct 04
S50	8183-DTU	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	Diskette	40GB	DVD	Extreme 2	Chip	Gigabit XP Pro	No	Oct 04
S50	8183-GMU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2	Chip	Gigabit XP Pro	No	Oct 04
S50	8183-GNU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	DVD	Extreme 2	Chip	Gigabit XP Pro	Global	Oct 04
S50	8183-GJU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	40GB	Combo	Extreme 2		Gigabit XP Pro	No	Oct 04
S50	8183-GVU	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	Diskette	80GB	Combo	Extreme 2		Gigabit XP Pro	<b>Educ</b>	Oct 04
S50	8183-H4U	2x3	Pentium 4	3.4E	1MB	800	HT	512MB	Diskette	40GB	CD	Extreme 2	Chip	Gigabit XP Pro	No	Oct 04
S50	8183-H7U	2x3	Pentium 4	3.4E	1MB	800	HT	512MB	Diskette	80GB	Combo	Extreme 2		Gigabit XP Pro	No	Oct 04

Positioning Processor	Smallest ThinkCentre desktop without compromise <b>Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533MHz system bus or <b>Intel Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz</b> with 533 or 800MHz bus	<b>Small Form Factor</b>  Bay ① 3.5", slim .5", access, std or opt diskette Bay ② 5.25", HH 1.6", access, std or opt optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)
Hyper-Threading L2 cache	Some: Hyper-Threading (HT) technology Celeron: <b>256KB</b> std and max / ECC / full speed Pentium 4: <b>1MB</b> std and max / ECC / full speed	
Implementation	Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>6</sup>	<b>256</b> or <b>512MB std</b> / 2GB max	• Business black color; metal case; 9.4 liters • 12.2" W X 14.1"D X 3.3"H • 310mm W X 358mm D X 85mm H • With vertical stand: 5.0" W X 14.6"D X 13.6"H • With vertical stand: 126mm W X 370mm D X 346mm H • 18.0 to 20.0 lb (8.1 to 9.1 kg) • Bays 1 and 2/3 flip up (latched and pivoting) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, diskette drive, optical drive removal • Two PCI slots on riser card • Toolless PCI slots and riser card retention • Toolless systemboard retention • Steel chassis supports 100 lb (45kg) monitor on top • System stand for vertical orientation
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used	
Memory - type	533MHz system bus: <b>PC2700 333MHz DDR1 (CL2.5);</b> 800MHz system bus: <b>PC3200 400MHz DDR1 (CL3);</b> All: non-parity / ind std / unbuffered / dual channel capable	
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector	
EIDE disk	<b>40</b> or <b>80GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts	<b>SYSTEMS MANAGEMENT</b> • PC 2001-compliant • Advanced Power Management 1.2 • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.1-compliant • DMI 2.0-compliant • Security chip models: Asset ID™.19 (system-specific info in chip)
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)	
EIDE cables	One EIDE 80-conductor cable (one 2-drop cable to optical and disk) / one EIDE connector on systemboard	
CD DVD Combo	Some: 48X-20X <sup>4</sup> CD-ROM / EIDE Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5	
SATA cables	No SATA cables / two SATA connectors on systemboard	
Diskette drive	Some: 3.5" 1.44MB diskette drive	
Chipset	<b>Intel 865G chipset</b> / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor	
Ports	Front: two USB (Version 2.0), microphone in (stereo), headphone out (stereo) Back: six USB (Version 2.0), two serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	<b>SECURITY</b> • U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (for attachment of optional cable lock) • Power-on password • Administrator password • Boot sequence control • Diskette boot inhibit • Boot without keyboard or mouse • Diskette and disk I/O control • Serial/parallel I/O control • Security chip models: security chip providing C2 tamper switch, Asset ID™.19, keylock on chassis, and other features
Audio connectors	Back: line-in (stereo), line-out (stereo) [all 3.5mm]	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec	
Speaker	One internal speaker for business audio	
Ethernet	Some: 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.2 Some: 10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2	
Security chip	Some: <b>Embedded Security Subsystem 2.0</b> <sup>18</sup> / hardware key storage / multi-factor authentication / local file encryption / Atmel® chip / TCG-compliant	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black	
Cooling fans	Two or three variable speed fans (power supply, fansink, 3.2GHz have third fan)	

<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	533MHz: 256MB PC2700 CL2.5 NP DDR1 31P8855	<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ <b>3 year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></b> ⇨ <b>Onsite service upgrade options via ServicePac® at ibm.com/services/us/its/pdf/wamomxeu.pdf</b> ⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b>
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 512MB PC2700 CL2.5 NP DDR1 31P8856	
<b>Preloaded</b> (only some listed)	533: 1GB PC2700 CL2.5 NP DDR1 UDIMM 31P8857	
• Model 63U/BSU/GLU/GVU: contains additional module with a specialized education preload image**	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685	
• Access IBM	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686	
• Rapid Restore™ Ultra	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272	
• PC-Doctor™ (diagnostics)	ThinkVision L170 17" Monitor (black) 6734AB0	
• InterVideo WinDVD (combo, DVD models)	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
• RecordNow and DLA (combo models)	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works	

See footnotes for important warranty information  
US models announced September 21, 2004  
US models withdrawn effective June 2005

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# ThinkCentre™ S50 (8417) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Bus MHz	Memory <sup>8</sup> Memory <sup>8</sup>	Memory type	Diskette drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip Ethernet	Limited Preload warranty	Workhorse Gbl, Entry	Avail date			
S50	8417-31U	2x3	Pentium® 4	2.8C	512KB	800	256MB	PC2700	Dskte	40GB <sup>2</sup>	Extreme™ 2	No	10/100	XP Pro <sup>5</sup>	3yr CRU	No	Nov 03	
S50	8417-32U	2x3	Pentium 4	2.8C	512KB	800	512MB	PC2700		40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Nov 03
S50	8417-41U	2x3	Pentium 4	3.0	512KB	800	256MB	PC2700	Dskte	40GB	Extreme 2	No	10/100	XP Pro	3yr CRU	No	Nov 03	
S50	8417-42U	2x3	Pentium 4	3.0	512KB	800	512MB	PC2700	Dskte	40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Nov 03
S50	8417-33U	2x3	Pentium 4	2.8E	1MB	800	512MB	PC2700	Dskte	40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Feb 04
S50	8417-43U	2x3	Pentium 4	3.0E	1MB	800	256MB	PC2700		40GB	Extreme 2	No	10/100	XP Pro	3yr CRU	No	Feb 04	
S50	8417-44U	2x3	Pentium 4	3.0E	1MB	800	512MB	PC2700	Dskte	40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Feb 04
S50	8417-51U	2x3	Pentium 4	3.2E	1MB	800	512MB	PC3200	Dskte	40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Oct 04
S50	8417-61U	2x3	Pentium 4	3.4E	1MB	800	512MB	PC3200	Dskte	40GB	CD	Extreme 2	No	Gigabit	XP Pro	3yr CRU	No	Oct 04

Positioning Processor	<i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz</b> with 800MHz system bus	<b>Small Form Factor</b> 
Hyper-Threading L2 cache Implementation	Hyper-Threading (HT) technology <b>512KB or 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>8</sup>	<b>256 or 512MB std</b> / 2GB max	<b>Bay ①</b> 3.5", slim .5", access, std or opt diskette <b>Bay ②</b> 5.25", HH 1.6", access, std or opt optical <b>Bay ③</b> 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) • Business black color; metal case; 9.4 liters • 12.2" W X 14.1"D X 3.3"H • 310mm W X 358mm D X 85mm H • With vertical stand: 5.0" W X 14.6"D X 13.6"H • With vertical stand: 126mm W X 370mm D X 346mm H • 18.0 to 20.0 lb (8.1 to 9.1 kg) • Bays 1 and 2/3 flip up (latched and pivoting) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, diskette drive, optical drive removal • Two PCI slots on riser card • Toolless PCI slots and riser card retention • Toolless systemboard retention • Steel chassis supports 100 lb (45kg) monitor on top • System stand for vertical orientation
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used	
Memory - type	<b>PC2700 333MHz DDR1</b> or <b>PC3200 400MHz DDR1 (DDR-SDRAM)</b> / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable	
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector	
EIDE disk EIDE controller EIDE cables CD SATA controller SATA cables Diskette drive	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) One EIDE 80-conductor cable (one 2-drop cable to optical and disk) / one EIDE connector on systemboard <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 No SATA cables / two SATA connectors on systemboard <i>Some:</i> 3.5" 1.44MB diskette drive	
Chipset	<b>Intel 865G chipset</b> / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / <b>SMSC® LPC47M233 Super I/O</b> for diskette, parallel, serial, keyboard, mouse, temperature sensor	
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> six USB (Version 2.0), two serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Audio connectors Audio	<i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec	
Speaker	One internal speaker for business audio	
Ethernet	<i>Some:</i> 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.2 <i>Some:</i> 10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2	
Security chip	None	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black	
Cooling fans	Two or three variable speed fans (power supply, fansink, 3.2GHz have third fan)	
Power supply	200 watts with variable speed fan / universal / manual switch	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	<b>SYSTEMS MANAGEMENT</b> • PC 2001-compliant • Advanced Power Management 1.2 • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.1-compliant • DMI 2.0-compliant  <b>SECURITY</b> • U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (for attachment of optional cable lock) • Power-on password • Administrator password • Boot sequence control • Diskette boot inhibit • Boot without keyboard or mouse • Diskette and keyboard I/O control • Serial/parallel I/O control
Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)	128MB PC3200 CL3 NP DDR1 UDIMM 22P9271 256MB PC3200 CL3 NP DDR1 UDIMM 73P2685 512MB PC3200 CL3 NP DDR1 UDIMM 73P2686 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Portable 40GB Hard Disk 22P7196 USB 2.0 Memory Key 512MB 22P9230 ThinkVision L150 15" Monitor (black) 6636AC1 ThinkVision L170 17" Monitor (black) 6734AB0 ThinkVision L170p 17" Monitor (black) 6734HB0 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C170 17" (16.0" vis) (black) 673766N ThinkVision C190 19" (18.0" vis) (black) 673960N ThinkVision C220p 22" (20.0" vis) (black) 673560N 500 Uninterrupt Powr Supp (flat pack) 33L3477 Belkin® 800VA UPS with AVR technology 31P7662 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
<b>Preloaded</b>		<b>ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://ibm.com/thinkvantage">ibm.com/thinkvantage</a></b>  <b>LIMITED WARRANTY<sup>1</sup></b> ⇨ <b>3 year Customer Replaceable Unit (CRU) parts only</b> ⇨ <b>This machine is designed to be repaired entirely with customer-replaceable parts. Lenovo will only provide replacement parts and telephone support to assist installation. Additional service or support will result in additional charges.</b> ⇨ <b>Call 1-800-IBM-SERV (426-7378) to assist with problem isolation to determine if warranty service is required</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b>
• Access IBM • Rapid Restore™ Ultra • Update Connector™.15 • Adobe Acrobat Reader • PC-Doctor™ (diagnostics) • Norton AntiVirus (OEM Version)		
<b>Downloadable</b>		
• Software Delivery Assistant • System Migration Assistant • IBM Director Agent		
<b>License</b> - CD not included		
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		

See footnotes for important warranty information  
US models announced November 18, 2003, February 10, 2004, or September 21, 2004  
US models withdrawn effective January or June 2005

# ThinkCentre® S51 (8171) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
<b>S51</b>	8171-11U	2x3	Pentium® 4 520	2.8 1MB	800	HT	512MB	40GB <sup>2</sup>	CD	GMA 900 GMCH	Sec	No	XP Pro <sup>5</sup>	No	Aug 2004
<b>S51</b>	8171-21U	2x3	Pentium 4 530	3.0 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	No	Aug 2004
<b>S51</b>	8171-31U	2x3	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	No	XP Pro	W G	Aug 2004
<b>S51</b>	8171-35U	2x3	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	Yes	XP Pro	No	Aug 2004
<b>S51</b>	8171-36U	2x3	Pentium 4 540	3.2 1MB	800	HT	256MB	40GB		GMA 900 GMCH	Sec	No	XP Pro	No	Aug 2004

Positioning Processor	<i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Pentium 4 Processor 520 (2.8GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 800MHz system bus	<b>Small Form Factor</b>	
Hyper-Threading L2 cache	Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	Bay ① 3.5", slim .5", access, std or opt diskette	
Memory std/max <sup>8</sup>	<b>256MB</b> or <b>512MB</b> std / 2GB max	Bay ② 5.25", HH 1.6", access, std or opt optical	
Memory	Two 184-pin gold plated DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable	Bay ③ 3.5", SL 1", no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)	
SATA disk	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts	Slot 2: half-length (175mm), full-height, PCI Express x1	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6	(slot x16 length so supports optional ADD2 card)	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA connectors on systemboard		
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)		
EIDE cables	<i>Some:</i> one 1-drop EIDE 80-conductor cable to optical		
Diskette drive	<i>All:</i> one EIDE connector on systemboard		
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor <sup>®</sup> PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX <sup>®</sup> Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec		
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]		
Speaker	One internal speaker for business audio		
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom <sup>®</sup> NetXtreme <sup>™</sup> Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN <sup>®</sup> / ACPI 1.1 / PXE 2.0 and RPL remote boot		
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Three variable speed fans (two in front; power supply fan in back)		
Power supply	225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs		

<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	128MB PC3200 CL3 NP DDR1 UDIMM	22P9271
- Disk-to-Disk Recovery (in hidden protected area)	256MB PC3200 CL3 NP DDR1 UDIMM	73P2685
<b>Preloaded</b>	512MB PC3200 CL3 NP DDR1 UDIMM	73P2686
• Access Program	1GB PC3200 CL3 NP DDR1 UDIMM	22P9272
• Rescue and Recovery <sup>™</sup>	40GB Serial ATA150 Disk (7200 rpm)	22P7185
• Update Connector <sup>™,15</sup>	80GB Serial ATA150 Disk (7200 rpm)	09N4253
• Adobe Reader	160GB Serial ATA150 Disk (7200 rpm)	09N4254
• Norton AntiVirus (OEM version)	48X/32X/48X Max <sup>4</sup> CD-RW internal (black)	22P7042
• PC-Doctor <sup>™</sup> (diagnostics)	48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black)	73P3300
<b>Downloadable</b>	Multi-Burner Plus <sup>5</sup> (DVD±RW; internal)	73P3370
• Client Security Software	USB 2.0 Portable Multi-Burner Drive	22P9163
• Software Delivery Assistant	USB 2.0 Portable 80GB Hard Disk	40Y8726
• System Migration Assistant	USB 2.0 Memory Key 1GB	40Y7421
• IBM Director Agent	ThinkVision® L151 15" Monitor (black)	9205AB2
<b>License</b> - CD not included	ThinkVision L151p 15" Monitor (black)	9205HB2
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision L171 17" Monitor (black)	9417AB1
	ThinkVision L171p 17" Monitor (black)	9417HB7
	ThinkVision L191p 19" Monitor (black)	9419HB7
	ThinkVision L200p 20.1" Monitor (black)	6736HC9
	ThinkVision C170 17" (16.0" vis) (black)	6737P6N
	ThinkVision C190 19" (18.0" vis) (black)	6739P0N
	Belkin® 800VA UPS with AVR technology	31P7662
	Kensington® MicroSaver® Desktop Lock	06P3839
	Enh Perf Wireless Keyboard and Mouse	73P4067
	Enhanced Performance USB Keyboard	73P2620
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

<b>SYSTEMS MANAGEMENT</b>
<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>
<b>SECURITY</b>
<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (in rear for attachment of optional Kensington MicroSaver cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch and keylock on chassis</li> </ul>
<b>LIMITED WARRANTY<sup>1</sup></b>
<ul style="list-style-type: none"> <li>⇨ <b>3 year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3 year LOR 9x5, Next Business Day</b> (ThinkPlus<sup>™</sup> part number 41C9197)</li> <li>• <b>3 year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> </ul> </li> <li>⇨ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>

See footnotes for important warranty information  
US models announced August 3, 2004  
US models withdrawn effective August or December 2005

# ThinkCentre® S51 (8171) - November 2004 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
S51	8171-A3U	2x3	Celeron® D 330	2.66	256K	533	512MB	40GB <sup>2</sup>	CD	GMA 900	Sec	No	XP Pro <sup>5</sup>	No	Nov 2004
S51	8171-A4U	2x3	Celeron D 330	2.66	256K	533	512MB	40GB	CD	GMA 900	Sec	No	XP Pro	<b>Educ</b>	Nov 2004
S51	8171-A5U	2x3	Celeron D 335	2.80	256K	533	256MB	40GB	CD	GMA 900	Sec	No	XP Pro	No	Nov 2004
S51	8171-A6U	2x3	Celeron D 335	2.80	256K	533	512MB	40GB	CD	GMA 900	Sec	No	XP Pro	<b>Educ</b>	Nov 2004
S51	8171-15U	2x3	Pentium® 4 515	2.93	1MB	533	512MB	40GB	CD	GMA 900	Sec	No	XP Pro	No	Jan 2005
S51	8171-2CU	2x3	Pentium 4 530	3.0	1MB	800	512MB	40GB	DVD	GMA 900	Sec	No	XP Pro	No	Nov 2004
S51	8171-2DU	2x3	Pentium 4 530	3.0	1MB	800	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004
S51	8171-3FU	2x3	Pentium 4 540	3.2	1MB	800	512MB	80GB	DVD	GMA 900	Sec	Yes	XP Pro	W G	Nov 2004
S51	8171-3GU	2x3	Pentium 4 540	3.2	1MB	800	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	No	Nov 2004
S51	8171-3HU	2x3	Pentium 4 540	3.2	1MB	800	512MB	80GB	Combo	GMA 900	Sec	No	XP Pro	<b>Educ</b>	Nov 2004

Positioning Processor	<p><i>Smallest ThinkCentre desktop without compromise</i>  <b>Intel® Celeron D Processor 330 (2.66GHz) or 335 (2.80GHz)</b> with 533MHz bus or <b>Pentium 4 Processor 515 (2.93GHz), 530 (3.0GHz), or 540 (3.2GHz)</b> with 533 or 800MHz system bus</p>						<p><b>Small Form Factor</b></p>  <p>Bay ① 3.5", slim .5", access, std or opt diskette                  Bay ② 5.25", HH 1.6", access, std or opt optical                  Bay ③ 3.5", SL 1", no access, std disk</p>																																			
Hyper-Threading L2 cache	<p><i>Some: Hyper-Threading (HT) technology</i>  <b>256KB</b> or <b>1MB</b> std and max / ECC / full speed</p>						<p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)                  Slot 2: half-length (175mm), full-height, PCI Express x1 (slot x16 length so supports optional ADD2 card)</p>																																			
Implementation	<p>Processor and L2 cache in FC-LGA4 in LGA775 socket</p>						<p>• Business black color; metal case                  • 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)                  • 310mm W X 358mm D X 85mm H (87.5mm H with feet)                  • With vertical stand: 5.0" W X 15.4"D X 13.6"H                  • With vertical stand: 127mm W X 390mm D X 346mm H                  • 18.0 to 20.0 lb (8.1 to 9.1 kg)                  • Bays 1 and 2/3 flip up (latched and pivoting)                  • Toolless cover flips up and tilts backward on rear hinges                  • Toolless disk, diskette drive, optical drive removal                  • Two slots on riser card (PCI and PCI Express x1)                  • Toolless PCI slots and riser card retention                  • Toolless systemboard retention                  • Steel chassis supports 100 lb (45kg) monitor on top                  • System stand for vertical orientation</p>																																			
Memory std/max <sup>9</sup>	<p><b>256</b> or <b>512MB</b> std / 2GB max</p>						<p>• <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable</p>																																			
Memory	<p>Two 184-pin gold plated DIMM sockets / one socket used /</p>																																									
Graphics	<p><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</p>																																									
SATA disk	<p><b>40</b> or <b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts</p>																																									
SATA controller	<p>Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6</p>																																									
SATA cables	<p>One SATA cable (one 1-drop to disk) / two SATA connectors</p>																																									
EIDE CD or DVD	<p><i>Some: 48X-20X<sup>4</sup> CD-ROM; Some: 16X-48X Max<sup>4</sup> DVD-ROM</i></p>																																									
EIDE Combo	<p><i>Some: 48X/24X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i></p>																																									
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)</p>																																									
EIDE cables	<p><i>Some: one 1-drop EIDE 80-conductor cable to optical</i>  <i>All: one EIDE connector on systemboard</i></p>																																									
Diskette drive	<p>3.5" 1.44MB diskette drive</p>																																									
Chipset	<p><b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log</p>						<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>																																			
Ports	<p><i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm]  <i>Back:</i> six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>						<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch and keylock on chassis</li> </ul>																																			
Audio	<p>Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec</p>																																									
Audio connectors	<p><i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]</p>																																									
Speaker	<p>One internal speaker for business audio</p>																																									
Ethernet	<p>10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / Wake on LAN® / PXE 2.0</p>																																									
Security chip	<p><b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / TCG-compliant</p>																																									
Keyboard	<p>104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p>																																									
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black</p>																																									
Cooling fans	<p>Three variable speed fans (two in front; power supply fan in back)</p>																																									
Power supply	<p>225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs</p>																																									
<b>Preload with Windows XP Professional<sup>5</sup></b>	<p>Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)</p>						<p><b>Accessories</b></p> <table border="1"> <tr><td>128MB PC3200 CL3 NP DDR1 UDIMM</td><td>22P9271</td></tr> <tr><td>256MB PC3200 CL3 NP DDR1 UDIMM</td><td>73P2685</td></tr> <tr><td>512MB PC3200 CL3 NP DDR1 UDIMM</td><td>73P2686</td></tr> <tr><td>1GB PC3200 CL3 NP DDR1 UDIMM</td><td>22P9272</td></tr> <tr><td>160GB Serial ATA150 Disk (7200 rpm)</td><td>09N4254</td></tr> <tr><td>Multi-Burner Plus<sup>6</sup> (DVD±RW; internal)</td><td>73P3370</td></tr> <tr><td>USB 2.0 Portable Multi-Burner Drive</td><td>22P9163</td></tr> <tr><td>USB 2.0 Memory Key 1GB</td><td>40Y7421</td></tr> <tr><td>ThinkVision® L151 15" Monitor (black)</td><td>9205AB2</td></tr> <tr><td>ThinkVision L151p 15" Monitor (black)</td><td>9205HB2</td></tr> <tr><td>ThinkVision L171 17" Monitor (black)</td><td>9417AB1</td></tr> <tr><td>ThinkVision L171p 17" Monitor (black)</td><td>9417HB7</td></tr> <tr><td>ThinkVision L200p 20.1" Monitor (black)</td><td>6736HC9</td></tr> <tr><td>ThinkVision C170 17" (16.0" vis) (black)</td><td>6737P6N</td></tr> <tr><td>Enh Perf Wireless Keyboard and Mouse</td><td>73P4067</td></tr> </table>						128MB PC3200 CL3 NP DDR1 UDIMM	22P9271	256MB PC3200 CL3 NP DDR1 UDIMM	73P2685	512MB PC3200 CL3 NP DDR1 UDIMM	73P2686	1GB PC3200 CL3 NP DDR1 UDIMM	22P9272	160GB Serial ATA150 Disk (7200 rpm)	09N4254	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370	USB 2.0 Portable Multi-Burner Drive	22P9163	USB 2.0 Memory Key 1GB	40Y7421	ThinkVision® L151 15" Monitor (black)	9205AB2	ThinkVision L151p 15" Monitor (black)	9205HB2	ThinkVision L171 17" Monitor (black)	9417AB1	ThinkVision L171p 17" Monitor (black)	9417HB7	ThinkVision L200p 20.1" Monitor (black)	6736HC9	ThinkVision C170 17" (16.0" vis) (black)	6737P6N	Enh Perf Wireless Keyboard and Mouse	73P4067
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<b>Preloaded</b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package**</li> <li>• Access Program</li> <li>• Rescue and Recovery™</li> <li>• Update Connector™<sup>15</sup></li> <li>• Adobe Reader</li> <li>• Norton AntiVirus (OEM version)</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• InterVideo WinDVD (DVD, combo model)</li> <li>• RecordNow and DLA (combo model)</li> <li>• InterVideo WinDVD Creator (DVD)</li> </ul>						<p>**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works</p>																																			
							<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3 year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>																																			

See footnotes for important warranty information  
 US models announced November 16, 2004  
 US models withdrawn effective June, August, or December 2005

# ThinkCentre® S51 (8171) - February 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 GHz cache	Bus Hyper- MHz Thread	Memory <sup>6</sup> EM64T in MB	Diskette drive	SATA disk	EIDE optical	Security Graphics	Cover chip	Workhorse Preload Global, Educ	Avail date
S51	8171-A8U 2x3	Celeron® D 345J	3.06 256K	533	256	Dskte	40GB <sup>2</sup>	CD	GMA 900	Sec No	XP Pro <sup>5</sup>	No Feb 05
S51	8171-2EU 2x3	Pentium® 4 530	3.00 1MB	800 HT	512		80GB	Combo	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-2FU 2x3	Pentium 4 530	3.00 1MB	800 HT	512		40GB	CD	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-3KU 2x3	Pentium 4 540	3.20 1MB	800 HT	512		40GB	CD	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-3LU 2x3	Pentium 4 540	3.20 1MB	800 HT	512		80GB	Combo	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-4JU 2x3	Pentium 4 550	3.40 1MB	800 HT	512	Dskte	40GB	CD	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-4KU 2x3	Pentium 4 550	3.40 1MB	800 HT	512	Dskte	40GB	DVD	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-4LU 2x3	Pentium 4 550	3.40 1MB	800 HT	512		80GB	Combo	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-4MU 2x3	Pentium 4 550	3.40 1MB	800 HT	512	Dskte	80GB	Combo	GMA 900	Sec No	XP Pro	No Feb 05
S51	8171-4NU 2x3	Pentium 4 550	3.40 1MB	800 HT	512	Dskte	80GB	DVD±RW <sup>6</sup>	GMA 900	Sec No	XP Pro	<b>Educ</b> Feb 05
S51	8171-BDU 2x3	Pentium 4 630	3.00 2MB	800 HT	EM64T 512	Dskte	80GB	CD	GMA 900	Sec Yes	XP Pro	No Feb 05
S51	8171-DBU 2x3	Pentium 4 640	3.20 2MB	800 HT	EM64T 512	Dskte	80GB	CD	GMA 900	Sec Yes	XP Pro	No Feb 05

<p><b>Positioning</b> Processor</p> <p><i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Celeron D Processor 345J (3.06GHz)</b> with Execute Disable Bit and 533MHz system bus or <b>Intel Pentium 4 Processor 530 (3.00GHz), 540 (3.20GHz), 550 (3.40GHz), 630 (3.00GHz), or 640 (3.20GHz)</b> with Hyper-Threading and 800MHz bus</p> <p><b>Proc features</b> L2 cache Implementation</p> <p>Processor and L2 cache in FC-LGA4 in LGA775 socket</p> <p><b>Memory std/max<sup>8</sup></b> Memory</p> <p><b>256 or 512MB std / 2GB max</b> Two 184-pin gold plated DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual-channel capable</p> <p><b>Graphics</b></p> <p><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</p> <p><b>SATA disk</b> SATA controller SATA cables EIDE CD or DVD EIDE Combo EIDE DVD±RW EIDE controller EIDE cables</p> <p><b>40 or 80GB / SATA150 7200 rpm / vibration dampening mounts</b> Serial ATA / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / two SATA connectors <i>Some:</i> 48X-20X<sup>4</sup> CD-ROM; <i>Some:</i> 16X-48X Max<sup>4</sup> DVD-ROM <i>Some:</i> 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo <i>Some:</i> DVD and CD burner / Multi-Burner Plus Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) <i>Some:</i> one 1-drop EIDE 80-conductor cable to optical <i>All:</i> one EIDE connector on systemboard</p> <p><b>Diskette drive</b> <i>Some:</i> 3.5" 1.44MB diskette drive</p> <p><b>Chipset</b></p> <p><b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log</p> <p><b>Ports</b></p> <p><i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p><b>Audio</b></p> <p>Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec</p> <p><b>Audio connectors</b> Speaker Ethernet</p> <p><i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm] One internal speaker for business audio 10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / Wake on LAN® / PXE 2.0</p> <p><b>Security chip</b></p> <p><b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant</p> <p><b>Keyboard</b> Mouse Cooling fans Power supply</p> <p>104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Three variable speed fans (two in front; power supply fan in back) 225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs</p>	<p><b>Small Form Factor</b></p>  <p>Bay ① 3.5", slim .5", access, std or opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.0 to 20.0 lb (8.1 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand for vertical orientation</li> </ul> <p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul> <p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch and keylock on chassis</li> </ul> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
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See footnotes for important warranty information  
US models announced February 22, 2005  
US models withdrawn effective August 2005, December 2005, or May 2006

# ThinkCentre® S51 (8171) - April 2005 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>6</sup>	Diskette drive	SATA disk	EIDE optical	Security Chipset	Cover switch	Key-board	Workhorse Preload	Avail Global, Educ date
S51	8171-2KU	2x3	Pentium® 4 530	3.00	1MB	800	HT	512MB	80GB <sup>2</sup>	CD	915GV	Sec	Yes	Finger XP Pro <sup>5</sup>	No May 05
S51	8171-2PU	2x3	Pentium 4 530	3.00	1MB	800	HT	512MB	Dsktte	80GB	Combo	Sec	No	Pref XP Pro	Educ May 05
S51	8171-3RU	2x3	Pentium 4 540	3.20	1MB	800	HT	512MB	80GB	CD	915GV	Sec	Yes	Pref XP Pro	No May 05

Positioning Processor	<p><i>Smallest ThinkCentre desktop without compromise</i></p> <p><b>Intel® Pentium 4 Processor 530 (3.00GHz) or 540 (3.20GHz)</b> with 800MHz system bus</p> <p>Proc features Hyper-Threading (HT) technology</p> <p>L2 cache <b>1MB</b> std and max / ECC / full speed</p> <p>Implementation Processor and L2 cache in FC-LGA4 in LGA775 socket</p>								<p><b>Small Form Factor</b></p> 		
Memory std/max <sup>8</sup> Memory	<p><b>512MB std / 2GB max</b></p> <p>Two 184-pin gold plated DIMM sockets / one socket used (two sockets used on model 2PU) / <b>PC3200 400MHz DDR1 / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable</b></p>								<p>Bay ① 3.5", slim .5", access, std or opt diskette</p> <p>Bay ② 5.25", HH 1.6", access, std optical</p> <p>Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 2: half-length (175mm), full-height, PCI Express x1 (slot x16 length so supports optional ADD2 card)</p>		
Graphics	<p><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G or GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</p>								<p>• Business black color; metal case</p> <p>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</p> <p>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</p> <p>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</p> <p>• With vertical stand: 127mm W X 390mm D X 346mm H</p> <p>• 18.0 to 20.0 lb (8.1 to 9.1 kg)</p> <p>• Bays 1 and 2/3 flip up (latched and pivoting)</p> <p>• Toolless cover flips up and tilts backward on rear hinges</p> <p>• Toolless disk, diskette drive, optical drive removal</p> <p>• Two slots on riser card (PCI and PCI Express x1)</p> <p>• Toolless PCI slots and riser card retention</p> <p>• Toolless systemboard retention</p> <p>• Steel chassis supports 100 lb (45kg) monitor on top</p> <p>• System stand for vertical orientation</p>		
SATA disk	<p><b>80GB / SATA150</b> 7200 rpm / vibration dampening mounts</p>								<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip)</li> </ul> <p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• Some: cover intrusion switch and keylock on chassis</li> <li>• Some: fingerprint reader keyboard</li> </ul> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 3 year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3 year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9197)</li> <li>• 3 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> </ul> </li> <li>⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>		
SATA controller	<p>Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6</p>										
SATA cables	<p>One SATA cable (one 1-drop to disk) / two SATA connectors</p>										
EIDE CD	<p>Some: 48X-20X<sup>4</sup> CD-ROM</p>										
EIDE Combo	<p>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p>										
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)</p>										
EIDE cables	<p>Some: one 1-drop EIDE 80-conductor cable to optical</p> <p>All: one EIDE connector on systemboard</p>										
Diskette drive	<p>Some: 3.5" 1.44MB diskette drive</p>										
Chipset	<p><b>Intel 915G or 915GV Express Chipset / 82915G or GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6)</b> for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor<sup>®</sup> PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log</p>										
Ports	<p><i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm]</p> <p><i>Back:</i> six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>										
Audio	<p>Integrated digital audio / SoundMAX<sup>®</sup> Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec</p>										
Audio connectors	<p><i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]</p>										
Speaker	<p>One internal speaker for business audio</p>										
Ethernet	<p>10/100/1000 gigabit ethernet on planar / Broadcom<sup>®</sup> NetXtreme™ / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / Wake on LAN<sup>®</sup> / PXE 2.0</p>										
Security chip	<p><b>Embedded Security Subsystem 2.0<sup>18</sup></b> in NS PC8375T chip / TCG-compliant</p>										
Keyboard (one of following)	<p>[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black</p> <p>[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p>										
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black</p>										
Cooling fans	<p>Three variable speed fans (two in front; power supply fan in back)</p>										
Power supply	<p>225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs</p>										
<b>Preload with Windows XP Professional<sup>5</sup></b>		<b>Accessories</b>									
Microsoft® Windows® XP Professional with Service Pack 2		800MHz: 128MB PC3200 CL3 NP DDR1	22P9271								
- Disk-to-Disk Recovery (in hidden protected area)		800MHz: 256MB PC3200 CL3 NP DDR1	73P2685								
<b>Preloaded</b>		800MHz: 512MB PC3200 CL3 NP DDR1	73P2686								
• Some: contains additional module with a specialized education preload image in the base preload package**		800: 1GB PC3200 CL3 NP DDR1 UDIMM	22P9272								
• Access Program		80GB Serial ATA150 Disk (7200 rpm)	09N4253								
• Rescue and Recovery™		160GB Serial ATA150 Disk (7200 rpm)	09N4254								
• Update Connector™ <sup>15</sup>		Multi-Burner Plus <sup>®</sup> (DVD±RW; internal)	73P3370								
• Adobe Reader		USB Fingerprint Reader	73P4774								
• Norton AntiVirus (OEM version)		USB 2.0 Portable Multi-Burner Drive	22P9163								
• PC-Doctor™ (diagnostics)		USB 2.0 Memory Key 1GB	40Y7421								
• InterVideo WinDVD (DVD, combo model)		ThinkVision® L151 15" Monitor (black)	9205AB2								
• RecordNow and DLA (combo model)		ThinkVision L171p 17" Monitor (black)	9417HB7								
• Client Security Software		ThinkVision L191p 19" Monitor (black)	9419HB7								
<b>Downloadable</b>		ThinkVision L200p 20.1" Monitor (black)	6736HC9								
• Software Delivery Assistant		ThinkVision C170 17" (16.0" vis) (black)	6737P6N								
• System Migration Assistant		ThinkVision C190 19" (18.0" vis) (black)	6739P0N								
• IBM Director Agent		Belkin® 800VA UPS with AVR technology	31P7662								
<b>License</b> - CD not included		Kensington® MicroSaver® Desktop Lock	06P3839								
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		Enh Perf Wireless Keyboard and Mouse	73P4067								
		Enhanced Performance USB Keyboard	73P2620								
		Preferred Pro USB Keyboard	73P5220								
		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>									
		**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works									

See footnotes for important warranty information  
US models announced April 19, 2005  
US models withdrawn effective December 2005



# ThinkCentre® A50 (8084) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	Diskette drive	EIDE disk	EIDE optical	Graphics	Chipset	Modem	Front audio	Preload	Workhorse, Global, Educ	Avail date
A50	8084-D7U	3x5	Celeron®	2.66	256K	533		256MB	Yes	40GB <sup>2</sup>	CD	Extreme™ 2	GV	Yes	Yes	XP Pro <sup>5</sup>	No	Feb 05
A50	8084-41U	3x5	Pentium® 4	2.6	512K	400		256MB	Yes	40GB	CD	Extreme 2	GV	No	No	XP Pro	No	Jun 04
A50	8084-11U	3x5	Pentium 4	2.8	512K	533		256MB	Yes	40GB	CD	Extreme 2	GV	No	No	XP Pro	No	Jun 04
A50	8084-1AU	4x5	Pentium 4	2.8E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	No	No	XP Pro	No	Jun 04
A50	8084-1FU	3x5	Pentium 4	2.8	512K	400		256MB	Yes	40GB	CD	Extreme 2	GV	No	No	XP Pro	No	Jun 04
A50	8084-1GU	4x5	Pentium 4	2.8E	1MB	800	HT	512MB	Yes	40GB	Combo	Extreme 2	G	No	No	XP Pro	<b>Educ</b>	Jun 04
A50	8084-24U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	No	No	XP Pro	No	Jun 04
A50	8084-31U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	No	No	XP Pro	No	Jun 04
A50	8084-53U	4x5	Pentium 4	3.4E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	No	No	XP Pro	No	Nov 04
A50	8084-2AU	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	Yes	Yes	XP Pro	No	Feb 05
A50	8084-36U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	Yes	40GB	CD	Extreme 2	G	Yes	Yes	XP Pro	No	Feb 05

Positioning	<i>Great technology and affordable prices</i>											<b>Tower</b>			
Processor	<b>Intel® Celeron 2.66GHz</b> with 533MHz system bus or <b>Intel Pentium 4 at 2.6, 2.8, 3.0, 3.2, or 3.4GHz</b> with 400, 533, or 800MHz system bus <i>Some: Hyper-Threading (HT) technology</i> <b>256KB, 512KB, or 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket											<ul style="list-style-type: none"> <li>Business black color</li> <li>7.5" W X 15.7" D X 16.3" H</li> <li>190mm W X 399mm D X 415mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul>			
Hyper-Threading L2 cache Implementation												Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk			
Memory - std/max <sup>9</sup>	<b>256MB or 512MB std / 4GB max</b> Four 184-pin gold plated DIMM sockets / one socket used / 400/533MHz system bus: <b>PC2700 333MHz DDR1 (DDR-SDRAM); 800MHz: PC3200 400MHz DDR1</b> ; All: non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable											3x5 models with 865GV chipset: Slot 1: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v)			
Graphics	<b>Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 865G or GV GMCH / uses main memory (up to 64MB with 256MB+)</b> / 266MHz / DVMT / one 15-pin analog D-sub connector											4x5 models with 865G chipset: Slot 1: 3/4-length, full-height, 32-bit AGP 8X (1.5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) - modem* Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v) *some models			
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard														
EIDE disk	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts														
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk)														
CD	<i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i>														
Combo	<i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE</i>														
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 / No SATA cables / two SATA connectors on systemboard														
SATA cables															
Diskette drive	3.5" 1.44MB diskette drive														
Chipset	<b>Intel 865G or 865GV chipset / 82865G or 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5)</b> for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / <b>SMSC® LPC47M233 Super I/O</b> for diskette, parallel, serial, keyboard, mouse, temp sensor														
Front ports	Two USB (Version 2.0) <i>D7U/2AU/36U</i> : microphone (mono, 3.5mm), headphone (stereo, 3.5mm)														
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)														
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec														
Audio connectors	<i>Back</i> : microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]														
Beeper	One internal beeper														
Ethernet	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN®														
Modem	<i>Some: 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter</i>														
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black														
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black														
Cooling fans	Two or three variable speed fans (power supply and processor fansink)														
Power supply	230 watts with variable speed fan / universal / manual switch														

<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Model 53U: Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b> 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 ThinkVision® L151 15" Monitor (black) 9205AB2 ThinkVision L151p 15" Monitor (black) 9205HB2 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision C190 19" (18.0" vis) (black) 6739PON Enh Perf Wireless Keybrd and Mouse 73P4067 Enhanced Performance USB Keyboard 73P2620 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SB BIOS 2.3.1-compliant</li> <li>D MI 2.0-compliant</li> </ul>
<b>Preloaded</b> <ul style="list-style-type: none"> <li><i>Some</i>: contains additional module with a specialized education preload image in the base preload package**</li> <li>Access Program</li> <li>Rescue and Recovery™</li> <li>Update Connector™.15</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> <li>InterVideo WinDVD (combo models)</li> <li>RecordNow and DLA (combo)</li> </ul>	<b>Downloadable</b> <ul style="list-style-type: none"> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul>	<b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional); supports optional padlock</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> </ul>
**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon-Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3 year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4 year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>	

See footnotes for important warranty information  
 US models announced June 8, 2004, November 16, 2004, or February 22, 2005  
 US models withdrawn effective June or December 2005

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(8084) December 2005

# ThinkCentre™ A50 (8085) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	Diskette drive	EIDE disk	EIDE optical	Second optical	Graphics	Chipset	Mouse	Modem/ speakers	Workhorse, Global, Entry date	Avail			
A50	8085-41U	3x5	Pentium® 4	2.6	512K	400	128MB	40GB <sup>2</sup>	CD			Extreme™ 2	GV	2 btn			<b>Entry</b> Jun 04			
A50	8085-42U	3x5	Pentium 4	2.6	512K	400	256MB	Yes	40GB	CD-RW		Extreme 2	GV	Opcl	Mod/spk	No	Jun 04			
A50	8085-11U	3x5	Pentium 4	2.8	512K	533	128MB		40GB	CD		Extreme 2	GV	2 btn			<b>Entry</b> Jun 04			
A50	8085-18U	4x5	Pentium 4	2.8E	1MB	800	HT	256MB	Yes	40GB	CD-RW	Extreme 2	G	Opcl	Mod/spk	No	Jun 04			
A50	8085-19U	3x5	Pentium 4	2.8	512K	400	128MB		40GB	CD		Extreme 2	GV	2 btn			<b>Entry</b> Jun 04			
A50	8085-1AU	3x5	Pentium 4	2.8	512K	400	256MB	Yes	40GB	DVD	CD-RW	Extreme 2	GV	Opcl	Mod/spk	No	Jun 04			
A50	8085-1BU	3x5	Pentium 4	2.8A	1MB	533	256MB	Yes	80GB	Combo		Extreme 2	GV	Opcl	Mod/spk	No	Jun 04			
A50	8085-23U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	Yes	40GB	CD-RW	Extreme 2	G	Opcl	Mod/spk	No	Jun 04			
A50	8085-24U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	Yes	80GB	Combo	MX 440	64	G	Opcl	Mod/spk	No	Jun 04		
A50	8085-31U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	Yes	80GB	Combo	MX 440	64	G	Opcl	Mod/spk	No	Jun 04		
A50	8085-32U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	Yes	120G	DVD	DVD±RW <sup>6</sup>	MX 440	64	G	Opcl	Mod/spk	EP	No	Jun 04
A50	8085-1CU	3x5	Pentium 4	2.8A	1MB	533	256MB	Yes	40GB	CD-RW		Extreme 2	GV	Opcl	Mod/spk	No	Oct 04			
A50	8085-28U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	Yes	40GB	DVD	CD-RW	Extreme 2	G	Opcl	Mod/spk	No	Oct 04		
A50	8085-37U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	Yes	40GB	CD-RW	Extreme 2	G	Opcl	Mod/spk	No	Nov 04			
A50	8085-53U	4x5	Pentium 4	3.4E	1MB	800	HT	512MB	Yes	80GB	Combo	Extreme 2	G	Opcl	Mod/spk	No	Nov 04			

Positioning Processor	Great technology and affordable prices <b>Intel® Pentium 4 at 2.6, 2.8, 3.0, 3.2, or 3.4GHz</b> with 400, 533, or 800MHz system bus	<b>Tower</b> • Business black color; 31.4 liters • 7.5" W X 16.0"D X 16.3"H • 191mm W X 406mm D X 413mm H • 20.0 to 22.5 lb (9.1 to 10.2 kg) • Handle on top front • Disk bay pivots forward • Toolless rails for disk mounting • Toolless cover removal • Toolless AGP and PCI slots	
Hyper-Threading L2 cache Implementation	Some: Hyper-Threading (HT) technology <b>512KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket		
Memory - std/max <sup>8</sup> Memory	<b>128MB</b> or <b>256MB</b> or <b>512MB</b> std / 4GB max Four 184-pin gold plated DIMM sockets / one socket used (two sockets used on model 53U) / 400/533MHz system bus: <b>PC2700 333MHz DDR1</b> (DDR-SDRAM); <b>800MHz: PC3200 400MHz DDR1</b> ; All: non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable	Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, std or optional optical Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, open or std diskette Bay ⑤ 3.5", SL 1", no access, std disk	
Graphics (one of following)	• <b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G or GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector • <b>NVIDIA® GeForce4 MX 440</b> / AGP 8X adapter / GeForce4 MX GPU / <b>64MB</b> std and max 400MHz DDR-SDRAM / 350MHz RAMDAC / one 15-pin analog D-sub connector	3x5 models with 865GV chipset: Slot 1: 3/4-length, full-height, 32-bit PCI 2.3 (5v) - modem* Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) 4x5 models with 865G chipset: Slot 1: 3/4-length, full-height, 32-bit AGP 8X (1.5v)-graphics* Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) - modem Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v) * some models	
EIDE disk	<b>40, 80 or 120GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard		
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk)		
CD	Some: 48X-20X <sup>4</sup> CD-ROM / EIDE		
DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE		
Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE		
DVD±RW	Some: DVD and CD burner /CD-RW/DVD-RW Multi-Burner / EIDE		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 /		
SATA cables	No SATA cables / two SATA connectors on systemboard		
Diskette drive	Some: 3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865G or 865GV chipset</b> / 82865G or 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor		
Front ports	Two USB (Version 2.0) 24U/31U/32U: microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec		
Audio connectors	Back: microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]		
Speakers	Some: external active speakers / Jazz Infinity® / 2-piece / 3 watts / black color		
Ethernet	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN®		
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter		
Keyboard	Some: 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Model 32U: Enhanced Performance USB Keyboard, 2-port USB 2.0 hub, black		
Mouse	Some: [2 btn] Std 2-Button PS/2 Mouse (6-pin PS/2 connector), black Some: [Opcl] Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (power supply and processor fansink)		
Power supply	230 watts with variable speed fan / universal / manual switch		
<b>Preload with Windows XP Home<sup>5</sup></b>			
Microsoft® Windows® XP Home Edition			
- Disk-to-Disk Recovery (in hidden protected area); Model 53U: Serv Pack 2			
<b>Preloaded</b> (only some listed)			
• Rescue and Recovery™			
• InterVideo WinDVD (combo, DVD, DVD±RW)			
• InterVideo WinDVD Creator (DVD±RW)			
• Simple Backup (for DVD±RW)			
• RecordNow and DLA (not CD, DVD)			
<b>Accessories</b>			
800MHz: 128MB PC3200 CL3 NP DDR1	22P9271		
800MHz: 256MB PC3200 CL3 NP DDR1	73P2685		
800MHz: 512MB PC3200 CL3 NP DDR1	73P2686		
800: 1GB PC3200 CL3 NP DDR1 UDIMM	22P9272		
160GB Serial ATA150 Disk (7200 rpm)	09N4254		
Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370		
ThinkVision L150 15" Monitor (black)	6636AC1		
ThinkVision L170p 17" Monitor (black)	6734HB0		
ThinkVision C190 19" (18.0" vis) (black)	673960N		
Other options at <b>lenovo.com/options</b>			
<b>SYSTEMS MANAGEMENT</b>			
• PC 2001-compliant • Advanced Power Management 1.2 • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.1-compliant • DMI 2.0-compliant			
<b>SECURITY</b>			
• U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (for attachment of optional cable lock) • Power-on password • Administrator password • Boot sequence control • Diskette boot inhibit • Boot without keyboard or mouse • Diskette and disk I/O control • Serial/parallel I/O control			
<b>LIMITED WARRANTY<sup>1</sup></b>			
⇒ <b>1 year parts and labor</b> ⇒ <b>International Warranty Service<sup>9</sup></b> ⇒ <b>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time<sup>3</sup></b> ⇒ <b>Onsite service upgrade options (in eligible locations):</b> • <b>1 year 9x5 4 hour response</b> (ServicePac® part number 54P1858) • <b>3 year 9x5 4 hour response</b> (ServicePac part number 54P1862) ⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b>			

See footnotes for important warranty information  
US models announced June 8, October 19, or November 16, 2004  
US models withdrawn effective June 2005



# ThinkCentre® A50 (8085) - Celeron - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x	L2	Bus	Diskette	EIDE	EIDE	Second	Graphics	Chipset	Modem/	Workhorse, Avail
Type-model	bay	cache	MHz	Memory <sup>8</sup>	drive	disk	optical	in GMCH	Mouse	speakers	Preload Global, Entry date
A50 8085-A1U	3x5	Celeron®	2.4	128K	400	128MB	No	40GB <sup>2</sup> CD	Extreme™ 2	GV 2 btn	XP Home <sup>5</sup> Entry Jun 04
A50 8085-A3U	3x5	Celeron	2.4	128K	400	256MB	Yes	40GB CD-RW	Extreme 2	GV Opcl Mod/spk	XP Home No Jun 04
A50 8085-D2U	3x5	Celeron	2.6	128K	400	128MB	No	40GB CD	Extreme 2	GV 2 btn	XP Home Entry Jun 04
A50 8085-D3U	3x5	Celeron	2.6	128K	400	256MB	Yes	40GB DVD CD-RW	Extreme 2	GV Opcl Mod/spk	XP Home No Jun 04
A50 8085-A4U	3x5	Celeron D 320	2.40	256K	533	128MB	No	40GB CD	Extreme 2	GV Opcl	XP Home Entry Aug 04
A50 8085-B1U	3x5	Celeron D 325	2.53	256K	533	128MB	No	40GB CD	Extreme 2	GV Opcl	XP Home Entry Aug 04
A50 8085-D5U	3x5	Celeron D 330	2.66	256K	533	256MB	Yes	40GB DVD CD-RW	Extreme 2	GV Opcl Mod/spk	XP Home No Aug 04
A50 8085-E1U	3x5	Celeron D 335	2.80	256K	533	256MB	Yes	40GB Combo	Extreme 2	GV Opcl Mod/spk	XP Home No Aug 04
A50 8085-B3U	3x5	Celeron D 325	2.53	256K	533	256MB	Yes	40GB CD-RW	Extreme 2	GV Opcl Mod/spk	XP Home No Oct 04
A50 8085-E4U	3x5	Celeron D 340	2.93	256K	533	256MB	Yes	40GB Combo	Extreme 2	GV Opcl Mod/spk	XP Home No Nov 04

Positioning Processor	<i>Great technology and affordable prices</i> <b>Intel® Celeron at 2.4 or 2.6GHz</b> with 400MHz system bus or <b>Intel Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), 330 (2.66GHz), 335 (2.80GHz), or 340 (2.93GHz)</b> with 533MHz bus		<b>Tower</b>
Hyper-Threading L2 cache	No Hyper-Threading (HT) technology support		
Implementation	128KB or 256KB std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket		
Memory - std/max <sup>8</sup>	128MB or 256MB std / 4GB max		
Memory	Four 184-pin gold plated DIMM sockets / one socket used / <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.5" W X 15.7" D X 16.3" H</li> <li>• 190mm W X 399mm D X 415mm H</li> <li>• 20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>• Handle on top front</li> <li>• Disk bay pivots forward</li> <li>• Toolless rails for disk mounting</li> <li>• Toolless cover removal</li> <li>• Toolless AGP and PCI slots</li> </ul> <p>Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, std or optional optical Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, open or std diskette Bay ⑤ 3.5", SL 1", no access, std disk</p> <p>Slot 1: 3/4-length, full-height, 32-bit PCI 2.3 (5v) - modem* Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) * some models</p>
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector		
EIDE disk	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard		
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk)		
CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE		
DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE		
Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 /		
SATA cables	No SATA cables / two SATA connectors on systemboard		
Diskette drive	<i>Some:</i> 3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865GV chipset</b> / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor		
Front ports	Two USB (Version 2.0)		
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec		
Audio connectors	<i>Back:</i> microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]		
Speakers	<i>Some:</i> external active speakers / Jazz Infinity® / 2-piece / 3 watts / black color		
Ethernet	<i>All:</i> one internal beeper		
Modem	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN® <i>Some:</i> 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	<i>Some:</i> [2 btn] Std 2-Button PS/2 Mouse (6-pin PS/2 connector), black		
Cooling fans	Two variable speed fans (power supply and processor fansink)		
Power supply	230 watts with variable speed fan / universal / manual switch		

Preload with Windows XP Home <sup>5</sup>	Accessories	LIMITED WARRANTY <sup>1</sup>
Microsoft® Windows® XP Home Edition	128MB PC2700 CL2.5 NP DDR UDIMM	<ul style="list-style-type: none"> <li>⇨ 1 year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>⇨ Onsite service upgrade options (in eligible locations)<sup>7</sup>: <ul style="list-style-type: none"> <li>• 1 year 9x5 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2 year 9x5 Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 3 year 9x5 Next Business Day (ThinkPlus part number 41C9188)</li> <li>• 3 year 9x5 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>⇨ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇨ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
- Model E4U: Service Pack 2	256MB PC2700 CL2.5 NP DDR UDIMM	
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2700 CL2.5 NP DDR UDIMM	
<b>Preloaded</b>	1GB PC2700 CL2.5 NP DDR UDIMM	
• Access Program	80GB IDE Disk ATA-100 (7200 rpm)	
• Rescue and Recovery™	120GB IDE Disk ATA-100 (7200 rpm)	
• Update Connector™.15	160GB Serial ATA150 Disk (7200 rpm)	
• Norton AntiVirus (OEM version)	48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM	
• PC-Doctor™ (diagnostics)	Combo drive (black)	
• InterVideo WinDVD (DVD, combo models)	Multi-Burner Plus® (DVD±RW; internal)	
• RecordNow and DLA (CD-RW, combo)	USB 2.0 Memory Key 1GB	
<b>Downloadable</b>	ThinkVision® L151 15" Monitor (black)	
• Software Delivery Assistant	ThinkVision L171p 17" Monitor (black)	
• System Migration Assistant	ThinkVision L191p 19" Monitor (black)	
• IBM Director Agent	ThinkVision C190 19" (18.0" vis) (black)	
	Enh Perf Wireless Keyboard and Mouse	
	Enhanced Performance USB Keyboard	
	Preferred Pro USB Keyboard	
	Belkin® 800VA UPS with AVR technology	
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

See footnotes for important warranty information  
US models announced June 8, August 10, October 19, or November 16, 2004  
US models withdrawn effective June or December 2005

# ThinkCentre® A50 (8089) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Diskette drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	Workhorse Education	Gbl, Avail date
A50	8089-11U	1x2	Pentium® 4 2.8A	1MB	533		256MB	None	40GB <sup>2</sup>	CD	Extreme™ 2	None	Aug2004
A50	8089-12U	1x2	Pentium 4 2.8E	1MB	800	HT	256MB	None	40GB	Combo	Extreme 2	None	Aug2004
A50	8089-21U	1x2	Pentium 4 3.0E	1MB	800	HT	256MB	None	40GB	CD	Extreme 2	None	Aug2004
A50	8089-22U	1x2	Pentium 4 3.0E	1MB	800	HT	256MB	None	40GB	Combo	Extreme 2	None	Aug2004
A50	8089-31U	1x2	Pentium 4 3.2E	1MB	800	HT	256MB	None	40GB	CD	Extreme 2	None	Nov2004
A50	8089-32U	1x2	Pentium 4 3.2E	1MB	800	HT	512MB	None	40GB	Combo	Extreme 2	None	Nov2004

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

Positioning	<i>Smallest ThinkCentre desktop without compromise</i>										
Processor	<b>Intel® Pentium 4 at 2.8, 3.0, or 3.2GHz</b> with 533 or 800MHz bus										
Hyper-Threading	<i>Some: Hyper-Threading (HT) technology</i>										
L2 cache	<b>1MB</b> std and max / ECC / full speed										
Implementation	Processor and L2 cache in FC-PGA2 in mPGA478B socket										
Memory - std/max <sup>5</sup>	<b>256 or 512MB std</b> / 2GB max										
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used (two used on model 32U) / 256MB DIMM in each used socket										
Memory - type	533MHz system bus: <b>PC2700 333MHz DDR1</b> (CL2.5); 800MHz system bus: <b>PC3200 400MHz DDR1</b> (CL3); All: non-parity / ind std / unbuffered / dual channel capable										
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector										
EIDE disk	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts										
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)										
EIDE cables	Two cables (one 1-drop 80-conductor cable to disk; one 1-drop Ultrabay Enhanced cable to optical) / 2 EIDE connectors on planar										
CD	<i>Some: 24X-10X<sup>4</sup> CD-ROM / EIDE / Ultrabay Enhanced</i>										
Combo	<i>Some: 24X/24X/24X/8X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE / Ultrabay Enhanced</i>										
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5										
SATA cables	No SATA cables / one SATA connector on systemboard										
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive										
Chipset	<b>Intel 865GV chipset</b> / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor										
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm]										
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec										
Speaker	One internal speaker for business audio										
Ethernet	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2 / Wake on LAN®										
Modem	None										
Security chip	None										
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black										
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black										
Cooling fans	Three variable speed fans (front, back, power supply)										
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs										
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>										
Microsoft® Windows® XP Professional	533MHz: 128MB PC2700 CL2.5 NP DDR1 31P8854										
- Models 31U/32U: Service Pack 2	533MHz: 256MB PC2700 CL2.5 NP DDR1 31P8855										
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 512MB PC2700 CL2.5 NP DDR1 31P8856										
<b>Preloaded</b>	533: 1GB PC2700 CL2.5 NP DDR1 UDIMM 31P8857										
• Access Program	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271										
• Rescue and Recovery™	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685										
• Update Connector™.15	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686										
• Adobe Reader	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272										
• Norton AntiVirus (OEM version)	CD-RW/DVD Combo Ultrabay Enhanced 73P3275										
• PC-Doctor™ (diagnostics)	Multi-Burner Plus Ultrabay Enhanced Drive 73P3312										
• RecordNow and DLA (combo)	160GB Serial ATA150 Disk (7200 rpm) 09N4254										
• InterVideo WinDVD (combo models)	120GB IDE Disk ATA-100 (7200 rpm) 09N4249										
<b>Downloadable</b>	USB Portable Diskette Drive 05K9276										
• Software Delivery Assistant	USB 2.0 Portable Multi-Burner Drive 22P9163										
• System Migration Assistant	USB 2.0 Memory Key 1GB 40Y7421										
• IBM Director Agent	ThinkVision® L151 15" Monitor (black) 9205AB2										
<b>License</b> - CD not included	ThinkVision L151p 15" Monitor (black) 9205HB2										
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision C170 17" (16.0" vis) (black) 6737P6N										
	ThinkVision C190 19" (18.0" vis) (black) 6739P0N										
	ScrollPoint Pro Optical Mouse (black) 31P8700										
	Enh Perf Wireless Keyboard and Mouse 73P4067										
	Enhanced Performance USB Keyboard 73P2620										
	ThinkCentre Ultra Small Under Desk Mount 40Y8625										
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>										
<b>SYSTEMS MANAGEMENT</b>											
<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Power Management 1.2</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.1-compliant</li> <li>• DMI 2.0-compliant</li> </ul>											
<b>SECURITY</b>											
<ul style="list-style-type: none"> <li>• Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- optional cable locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard or mouse</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel enable or disable</li> <li>• Disk, removable, and network device boot password</li> </ul>											
<b>LIMITED WARRANTY<sup>1</sup></b>											
<ul style="list-style-type: none"> <li>↔ <b>3 year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3 year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3 year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4 year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9198)</li> <li>• <b>4 year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4 year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>											

See footnotes for important warranty information  
US models announced July 13 or November 16, 2004  
US models withdrawn effective January, June, or December 2005

# ThinkCentre® A50 (8090) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Diskette Memory	EIDE drive	EIDE disk	EIDE optical	Graphics in GMCH	Security chip	PCI modem	Workhorse Preload Education	Gbl, Avail date
A50	8090-A3U	1x2	Celeron® D 325	2.53 256KB	533		256MB	None	40GB <sup>2</sup>	CD	Extreme™ 2	None	XP Home <sup>5</sup>	No	Aug 2004
A50	8090-A1U	1x2	Celeron D 325	2.53 256KB	533		256MB	None	40GB <sup>2</sup>	CD	Extreme 2	None	XP Pro <sup>5</sup>	No	Aug 2004
A50	8090-A2U	1x2	Celeron D 330	2.66 256KB	533		256MB	None	40GB	CD	Extreme 2	None	XP Pro	No	Aug 2004
A50	8090-11U	1x2	Pentium® 4	2.8A 1MB	533		256MB	None	40GB	CD	Extreme 2	None	XP Pro	No	Aug 2004
A50	8090-12U	1x2	Pentium 4	2.8A 1MB	533		256MB	None	40GB	Combo	Extreme 2	None	XP Pro	No	Aug 2004
A50	8090-21U	1x2	Pentium 4	3.0E 1MB	800	HT	256MB	None	40GB	CD	Extreme 2	None	XP Pro	No	Aug 2004
A50	8090-22U	1x2	Pentium 4	3.0E 1MB	800	HT	256MB	None	40GB	Combo	Extreme 2	None	XP Pro	No	Aug 2004
A50	8090-A5U	1x2	Celeron D 330	2.66 256KB	533		256MB	None	40GB	Combo	Extreme 2	None	Modem XP Home	No	Nov 2004
A50	8090-A7U	1x2	Celeron D 335	2.80 256KB	533		256MB	None	40GB	CD	Extreme 2	None	XP Pro	No	Nov 2004
A50	8090-14U	1x2	Pentium 4	2.8A 1MB	533		512MB	None	40GB	Combo	Extreme 2	None	Modem XP Home	No	Nov 2004
A50	8090-26U	1x2	Pentium 4	3.0E 1MB	800	HT	512MB	None	80GB	Combo	Extreme 2	None	Modem XP Home	No	Nov 2004
A50	8090-31U	1x2	Pentium 4	3.2E 1MB	800	HT	256MB	None	40GB	CD	Extreme 2	None	XP Pro	No	Nov 2004
A50	8090-32U	1x2	Pentium 4	3.2E 1MB	800	HT	512MB	None	40GB	Combo	Extreme 2	None	XP Pro	No	Nov 2004

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

Positioning	<i>Smallest ThinkCentre desktop without compromise</i>	<b>Ultra Small Form Factor</b>
Processor	<b>Intel® Celeron D Processor 325 (2.53GHz), 330 (2.66GHz), or 335 (2.80GHz)</b> with 533MHz system bus or <b>Pentium 4 at 2.8, 3.0, or 3.2GHz</b> with 533 or 800MHz system bus	
Hyper-Threading	<i>Some:</i> Hyper-Threading (HT) technology	
L2 cache	<i>Celeron D:</i> <b>256KB</b> std and max / ECC / full speed <i>Pentium 4:</i> <b>1MB</b> std and max / ECC / full speed	
Implementation	Processor and L2 cache in FC-PGA2 in mPGA478B socket	
Memory - std/max <sup>8</sup>	<b>256 or 512MB std / 2GB max</b>	
Memory - sockets	Two 184-pin gold plated DIMM sockets / one socket used (two used on models 14U/26U/32U) / 256MB DIMM in each used socket	<b>Bay ① 3.5", SL 1", access, std disk (desktop)</b> <b>Bay ② 5.25", *slim .5", access, std optical (notebook)</b> * Optical bay is Ultrabay™ Enhanced 12.5mm high (same as used in select ThinkPad notebooks)  <b>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)</b> <ul style="list-style-type: none"> <li>• Up to 75% less space than desktop chassis</li> <li>• Business black color; metal case; 6.5 liters</li> <li>• 10.8" W X 10.8"D X 3.4"H</li> <li>• 275mm W X 275mm D X 87.5mm H</li> <li>• With vertical stand: 4.9" W X 10.6"D X 11.7"H</li> <li>• With vertical stand: 125mm W X 270mm D X 298mm H</li> <li>• 13.2 to 14.0 lb (6.0 to 6.4 kg)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk and optical drive removal</li> <li>• Bays 1 and 2 flip up (latched and pivoting)</li> <li>• Toolless PCI slot and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand ships standard for vertical orientation</li> </ul>
Memory - type	<b>533MHz system bus: PC2700 333MHz DDR1 (CL2.5); 800MHz system bus: PC3200 400MHz DDR1 (CL3); All: non-parity / ind std / unbuffered / dual channel capable</b>	
Graphics	<b>Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</b>	
EIDE disk	<b>40 or 80GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5)	
EIDE cables	Two cables (one 1-drop 80-conductor cable to disk; one 1-drop Ultrabay Enhanced cable to optical) / 2 EIDE connectors on planar	
CD	<i>Some:</i> 24X-10X <sup>4</sup> CD-ROM / EIDE / Ultrabay Enhanced	
Combo	<i>Some:</i> 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE / Ultrabay Enhanced	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5	
SATA cables	No SATA cables / one SATA connector on systemboard	
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive	
Chipset	<b>Intel 865GV chipset / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5)</b> for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor	
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm]	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec	
Speaker	One internal speaker for business audio	
Ethernet	10/100/1000 gigabit ethernet on planar / Intel 82541EI PHY (physical layer) and MAC / Intel Pro/1000MT Network Connection / 32-bit PCI 2.2 / Wake on LAN®	
Modem	<i>Some:</i> 56K10 V.90 data/fax soft modem / Conexant® chipset / PCI adapter	
Security chip	None	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black	
Cooling fans	Three variable speed fans (front, back, power supply)	
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs	

## SYSTEMS MANAGEMENT

- PC 2001-compliant
- Advanced Power Management 1.2
- Advanced Configuration and Power Interface (ACPI) 2.0b
- SMBIOS 2.3.1-compliant
- DMI 2.0-compliant

## SECURITY

- Security slot (in rear for optional Kensington Microsaver cable)
  - optional cable locks the cover by deactivating the cover release buttons
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard or mouse
- USB, ethernet, SATA, EIDE, serial, parallel enable or disable
- Disk, removable, and network device boot password

ThinkCentre desktops implement ThinkVantage™ technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

## LIMITED WARRANTY<sup>1</sup>

- ⇒ **1 year parts and labor**
- ⇒ **International Warranty Service<sup>8</sup>**
- ⇒ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **ThinkPlus™ services at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)**
- ⇒ **24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup>**

Preload with Windows XP Home <sup>5</sup>	Accessories
Microsoft® Windows® XP Home Edition	533MHz: 128MB PC2700 CL2.5 NP DDR1 31P8854
- Models Nov 2004: Service Pack 2	533MHz: 256MB PC2700 CL2.5 NP DDR1 31P8855
- Disk-to-Disk Recovery (in hidden protected area)	533MHz: 512MB PC2700 CL2.5 NP DDR1 31P8856
	533: 1GB PC2700 CL2.5 NP DDR1 UDIMM 31P8857
	800MHz: 128MB PC3200 CL3 NP DDR1 22P9271
	800MHz: 256MB PC3200 CL3 NP DDR1 73P2685
	800MHz: 512MB PC3200 CL3 NP DDR1 73P2686
	800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272
	CD-RW/DVD Combo Ultrabay Enhanced 73P3275
	Multi-Burner Plus Ultrabay Enhanced Drive 73P3312
	160GB Serial ATA150 Disk (7200 rpm) 09N4254
	120GB IDE Disk ATA-100 (7200 rpm) 09N4249
	USB 2.0 Portable Multi-Burner Drive 22P9163
	ThinkVision® L151 15" Monitor (black) 9205AB2
	ThinkCentre Ultra Small Under Desk Mount 40Y8625
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>

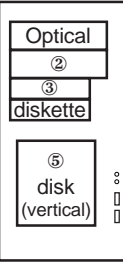
See footnotes for important warranty information  
US models announced July 13 or November 16, 2004  
US models withdrawn effective June or December 2005

# ThinkCentre™ A50 (8147) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	EIDE Memory <sup>8</sup>	Diskette drive	EIDE disk	EIDE optical	Graphics	Chipset	Preload	Limited warranty <sup>1</sup>	Workhorse, Global, Educ	Avail date	
A50	8147-D1U	3x5	Pentium® 4	2.6	512K	400	256MB	Yes	40GB <sup>2</sup>	CD	Extreme™ 2	GV	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-11U	3x5	Pentium 4	2.8A	1MB	533	256MB	Yes	40GB	CD	Extreme 2	GV	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-12U	4x5	Pentium 4	2.8E	1MB	800	256MB	Yes	40GB	CD-RW	Extreme 2	G	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-13U	3x5	Pentium 4	2.8	512K	400	256MB	Yes	40GB	CD	Extreme 2	GV	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-21U	4x5	Pentium 4	3.0E	1MB	800	256MB	Yes	40GB	CD	Extreme 2	G	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-22U	4x5	Pentium 4	3.0E	1MB	800	256MB	Yes	40GB	CD-RW	Extreme 2	G	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-23U	4x5	Pentium 4	3.0E	1MB	800	512MB	Yes	80GB	Combo	MX 440 64MB	GV	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-31U	4x5	Pentium 4	3.2E	1MB	800	256MB	Yes	40GB	CD	Extreme 2	G	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-32U	4x5	Pentium 4	3.2E	1MB	800	256MB	Yes	40GB	CD-RW	Extreme 2	G	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-33U	4x5	Pentium 4	3.2E	1MB	800	512MB	Yes	80GB	Combo	MX 440 64MB	GV	XP Pro	3/3 year	IOR	No	Jun 04
A50	8147-14U	3x5	Pentium 4	2.8A	1MB	533	256MB	Yes	40GB	Combo	Extreme 2	GV	XP Pro	3/3 year	IOR	No	Oct 04
A50	8147-24U	4x5	Pentium 4	3.0E	1MB	800	512MB	Yes	40GB	CD	Extreme 2	G	XP Pro	3/3 year	IOR	No	Oct 04
A50	8147-25U	4x5	Pentium 4	3.0E	1MB	800	512MB	Yes	40GB	CD-RW	Extreme 2	G	XP Pro	3/3 year	IOR	No	Oct 04
A50	8147-34U	4x5	Pentium 4	3.2E	1MB	800	512MB	Yes	40GB	CD	Extreme 2	G	XP Pro	3/3 year	IOR	No	Nov 04

These small and medium business (SMB) models are part of the US ThinkCentre Express Program

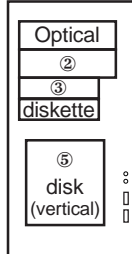
Positioning Processor	Great technology and affordable prices <b>Intel® Pentium 4 at 2.6, 2.8, 3.0, or 3.2GHz</b> with 400, 533, or 800MHz system bus	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; 31.4 liters</li> <li>7.5" W X 16.0"D X 16.3"H</li> <li>191mm W X 406mm D X 413mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul>	
Hyper-Threading L2 cache Implementation	Some: Hyper-Threading (HT) technology <b>512KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA4478B socket		
Memory - std/max <sup>8</sup> Memory	<b>256MB</b> or <b>512MB std</b> / 4GB max / dual channel capable Four 184-pin gold plated DIMM sockets / one socket used (two used on models 23U, 33U, 24U, 25U, 34U); <b>400/533MHz bus: PC2700 333MHz DDR1</b> (DDR-SDRAM); <b>800MHz: PC3200 400MHz DDR1</b> ; All: non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5)	Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk	
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G or GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</li> <li><b>NVIDIA® GeForce4 MX 440</b> / AGP 8X adapter / GeForce4 MX GPU / <b>64MB</b> std and max 400MHz DDR-SDRAM / 350MHz RAMDAC / one 15-pin analog D-sub connector</li> </ul>	3x5 models with 865GV chipset: Slot 1: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) 4x5 models with 865G chipset: Slot 1: 3/4-length, full-height, 32-bit AGP 8X (1.5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul> <b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> </ul> Supports ThinkVantage™ technologies	
EIDE disk	<b>40GB</b> or <b>80GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts		
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk)		
CD	Some: 48X-20X <sup>4</sup> CD-ROM / EIDE		
CD-RW	Some: 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE		
Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 /		
SATA cables	No SATA cables / two SATA connectors on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865G</b> or <b>865GV chipset</b> / 82865G or 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / <b>SMSC® LPC47M233</b> Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor		
Front ports	Two USB (Version 2.0)		
Rear ports	23U/33U: microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec		
Audio connectors	Back: microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]		
Beeper	One internal beeper		
Ethernet	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN®		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (power supply and processor fansink)		
Power supply	230 watts with variable speed fan / universal / manual switch		
<b>Preload with Windows XP Professional<sup>6</sup></b>	Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area); Model 34U: Serv Pack 2 <b>Preloaded</b> (only some listed) <ul style="list-style-type: none"> <li>Access IBM</li> <li>Rescue and Recovery™</li> <li>Norton AntiVirus (OEM version)</li> <li>InterVideo WinDVD (combo models)</li> <li>RecordNow and DLA (CD-RW, combo)</li> </ul> License - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	<b>Accessories</b> 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus® (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 ThinkVision L150 15" Monitor (black) 6636AC1 ThinkVision L170 17" Monitor (black) 6734AB0 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C190 19" (18.0" vis) (black) 673960N Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
<b>LIMITED WARRANTY<sup>1</sup></b>			
<ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon-Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 1-800-IBM-SERV (426-7378)</li> </ul>			

See footnotes for important warranty information  
US models announced June 8, October 19, or November 16, 2004  
US models withdrawn effective January or June 2005

# ThinkCentre™ A50 (8148) - Express - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	EIDE disk	EIDE optical	Graphics	Chipset	Audio front Mouse panel	Preload	Limited warranty <sup>1</sup>	Workhorse <sup>1</sup>	Global, Educ date
<b>A50</b>	8148-41U	3x5	Pentium® 4	2.6	512K	400		128MB	40GB <sup>2</sup>	CD	Extreme™ 2	GV 2	No	XP Home <sup>5</sup>	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-42U	3x5	Pentium 4	2.6	512K	400		256MB	40GB	CD	Extreme 2	GV O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-12U	4x5	Pentium 4	2.8E	1MB	800	HT	256MB	40GB	CD-RW	Extreme 2	G O	Yes	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-13U	3x5	Pentium 4	2.8	512K	400		256MB	40GB	CD	Extreme 2	GV O	Yes	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-15U	3x5	Pentium 4	2.8A	1MB	533		256MB	40GB	CD	Extreme 2	GV O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-21U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-22U	4x5	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD-RW	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-23U	4x5	Pentium 4	3.0E	1MB	800	HT	512MB	80GB	Combo	MX 440 64MB	G O	Yes	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-31U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	40GB	CD	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-32U	4x5	Pentium 4	3.2E	1MB	800	HT	256MB	40GB	CD-RW	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-33U	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	80GB	Combo	MX 440 64MB	G O	Yes	XP Pro	1/1 year	IOR	No Jun 04
<b>A50</b>	8148-16U	3x5	Pentium 4	2.8A	1MB	533		256MB	40GB	Combo	Extreme 2	GV O	No	XP Pro	1/1 year	IOR	No Oct 04
<b>A50</b>	8148-25U	4x5	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Oct 04
<b>A50</b>	8148-26U	4x5	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD-RW	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Oct 04
<b>A50</b>	8148-35U	4x5	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2	G O	No	XP Pro	1/1 year	IOR	No Nov 04

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

<b>Positioning</b> Processor Hyper-Threading L2 cache Implementation Memory - std/max <sup>8</sup> Memory		<b>Great technology and affordable prices</b> <b>Intel® Pentium 4 at 2.6, 2.8, 3.0, or 3.2GHz</b> with 400, 533, or 800MHz system bus Some: Hyper-Threading (HT) technology <b>512KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket <b>256MB</b> or <b>512MB std</b> / 4GB max / dual channel capable Four 184-pin gold plated DIMM sockets / one socket used (two used on 23U, 33U, 25U, 26U, 35U); <i>400/533MHz system bus: PC2700 333MHz DDR1</i> (DDR-SDRAM); <i>800MHz: PC3200 400MHz DDR1</i> ; All: non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5)		<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; 31.4 liters</li> <li>7.5" W X 16.0"D X 16.3"H</li> <li>191mm W X 406mm D X 413mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul>			
<b>Graphics</b> (one of following)		<ul style="list-style-type: none"> <li><b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865G or GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</li> <li><b>NVIDIA® GeForce4 MX 440</b> / AGP 8X adapter / GeForce4 MX GPU / 64MB std and max 400MHz DDR-SDRAM / 350MHz RAMDAC / one 15-pin analog D-sub connector</li> </ul>		Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk			
<b>EIDE controller</b>          <b>EIDE disk</b> <b>EIDE cables</b>  CD CD-RW Combo SATA controller SATA cables Diskette drive		Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard <b>40GB</b> or <b>80GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk) Some: 48X/20X <sup>4</sup> CD-ROM / EIDE Some: 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 / No SATA cables / two SATA connectors on systemboard 3.5" 1.44MB diskette drive		3x5 models with 865GV chipset: Slot 1: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v)  4x5 models with 865G chipset: Slot 1: 3/4-length, full-height, 32-bit AGP 8X (1.5v) Slot 2: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)			
<b>Chipset</b>		<b>Intel 865G or 865GV chipset</b> / 82865G or 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor		<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>			
<b>Front ports</b>   <b>Rear ports</b>  <b>Audio</b>  <b>Audio connectors</b> Beeper Ethernet		Two USB (Version 2.0) 12U/13U/23U/33U: microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec Back: microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm] One internal beeper 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN®		<b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> </ul>			
<b>Keyboard</b> <b>Mouse</b>		104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Some: [2] Std 2-Button PS/2 Mouse (6-pin PS/2 connector), black Some: [O] Optical Wheel Mouse (USB only), 400 dpi, black					
<b>Cooling fans</b> <b>Power supply</b>		Two variable speed fans (power supply and processor fansink) 230 watts with variable speed fan / universal / manual switch					
<b>Preload with Windows XP Home<sup>5</sup></b> Microsoft® Windows® XP Home Edition - Disk-to-Disk Recovery (in hidden protected area)		<b>Accessories</b> 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 ThinkVision L150 15" Monitor (black) 6636AC1 ThinkVision L170 17" Monitor (black) 6734AB0 ThinkVision C190 19" (18.0" vis) (black) 673960N Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		<ul style="list-style-type: none"> <li>1 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time<sup>3</sup></li> <li>Onsite service upgrade options (in eligible locations):<ul style="list-style-type: none"> <li>1 year 9x5 4 hour response (ServicePac® part number 54P1858)</li> <li>3 year 9x5 Next Business Day (ServicePac part number 54P1861)</li> </ul> </li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>		<b>LIMITED WARRANTY<sup>1</sup></b>	

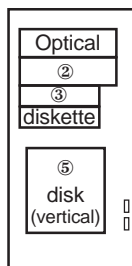
See footnotes for important warranty information  
US models announced June 8, October 19, or November 16, 2004  
US models withdrawn effective January 2005

# ThinkCentre® A50 (8148) - Celeron (Express) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Memory <sup>8</sup>	Diskette drive	EIDE disk	EIDE optical	Graphics	Chipset	Mouse	Preload	warranty <sup>1</sup>	Limited Global, Educ	Workhorse, Avail date	
A50	8148-A1U	3x5	Celeron®	2.4	128KB	400	256MB	Yes	40GB <sup>2</sup>	CD	Extreme™ 2	GV	Opcl	XP Pro <sup>5</sup>	1/1 year	LOR	No	Jun 04
A50	8148-A2U	3x5	Celeron	2.4	128KB	400	128MB	Yes	40GB	CD	Extreme 2	GV	2 btn	XP Home	1/1 year	LOR	No	Jun 04
A50	8148-D1U	3x5	Celeron	2.6	128KB	400	256MB	Yes	40GB	CD	Extreme 2	GV	Opcl	XP Pro	1/1 year	LOR	No	Jun 04
A50	8148-A4U	3x5	Celeron D 320	2.40	256KB	533	256MB	Yes	40GB	CD	Extreme 2	GV	Opcl	XP Pro	1/1 year	LOR	No	Aug 04
A50	8148-B2U	3x5	Celeron D 325	2.53	256KB	533	256MB	Yes	40GB	CD	Extreme 2	GV	Opcl	XP Pro	1/1 year	LOR	No	Aug 04
A50	8148-D3U	3x5	Celeron D 330	2.66	256KB	533	256MB	Yes	40GB	CD	Extreme 2	GV	Opcl	XP Pro	1/1 year	LOR	No	Aug 04
A50	8148-E1U	3x5	Celeron D 335	2.80	256KB	533	256MB	Yes	40GB	CD	Extreme 2	GV	Opcl	XP Pro	1/1 year	LOR	No	Aug 04

*These small and medium business (SMB) models are part of the US ThinkCentre Express Program*

Positioning Processor	Great technology and affordable prices <b>Intel® Celeron</b> at 2.4 or 2.6GHz with 400MHz system bus or <b>Intel Celeron D Processor 320 (2.40GHz), 325 (2.53GHz), 330 (2.66GHz), or 335 (2.80GHz)</b> with 533MHz system bus		<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.5" W X 15.7" D X 16.3" H</li> <li>190mm W X 399mm D X 415mm H</li> <li>20.0 to 22.5 lb (9.1 to 10.2 kg)</li> <li>Handle on top front</li> <li>Disk bay pivots forward</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal</li> <li>Toolless AGP and PCI slots</li> </ul> 
Hyper-Threading L2 cache	No Hyper-Threading (HT) technology support <b>128KB</b> or <b>256KB</b> std and max / ECC / full speed		
Implementation	Processor and L2 cache in FC-PGA2 in mPGA478B socket		
Memory - std/max <sup>8</sup> Memory	<b>128MB</b> or <b>256MB std</b> / 4GB max Four 184-pin gold plated DIMM sockets / one socket used / <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable		
Graphics	<b>Integrated Intel Extreme™ Graphics 2</b> / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) / two EIDE connectors on systemboard		
EIDE disk	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration damp mounts		
EIDE cables	Two EIDE 80-conductor cables (one 2-drop cable to optical(s), one 2-drop to disk)		
CD	48X-20X <sup>4</sup> CD-ROM / EIDE		
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 / No SATA cables / two SATA connectors on systemboard		
SATA cables			
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865GV chipset</b> / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / <b>SMSC® LPC47M233</b> Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor		
Front ports	Two USB (Version 2.0)		
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec		
Audio connectors	Back: microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm]		
Beeper	One internal beeper		
Ethernet	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN®		
Modem	None		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Some: [2 btn] Std 2-Button PS/2 Mouse (6-pin PS/2 connector), black Some: [Opcl] Optical Wheel Mouse (USB only), 400 dpi, black		
Cooling fans	Two variable speed fans (power supply and processor fansink)		
Power supply	230 watts with variable speed fan / universal / manual switch		
<b>Preload with Windows XP Home<sup>5</sup></b>	<b>Accessories</b>		<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul> <b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> </ul> Supports ThinkVantage™ technologies
Microsoft® Windows® XP Home Edition - Disk-to-Disk Recovery (in hidden protected area)	128MB PC2700 CL2.5 NP DDR UDIMM 31P8854 256MB PC2700 CL2.5 NP DDR UDIMM 31P8855 512MB PC2700 CL2.5 NP DDR UDIMM 31P8856 1GB PC2700 CL2.5 NP DDR UDIMM 31P8857		
<b>Preload with Windows XP Professional<sup>5</sup></b>	80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300		
Microsoft Windows XP Professional - Disk-to-Disk Recovery (in hidden protected area)	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 USB 2.0 Memory Key 1GB 40Y7421		
<b>Preloaded</b> (all; only some listed)	ThinkVision® L151 15" Monitor (black) 9205AB2 ThinkVision L151p 15" Monitor (black) 9205HB2 ThinkVision L171 17" Monitor (black) 9417AB1 ThinkVision L171p 17" Monitor (black) 9417HB7 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HC9 ThinkVision C190 19" (18.0" vis) (black) 6739P0N		
<b>Downloadable</b> (all)	Kensington® MicroSaver® Desktop Lock 06P3839 Enhanced Performance USB Keyboard 73P2620		
<b>License</b> - CD not included (all)	Belkin® 800VA UPS with AVR technology 31P7662		
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		

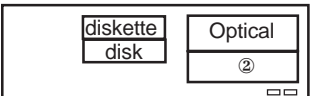
See footnotes for important warranty information  
US models announced June 8 or August 10, 2004  
US models withdrawn effective January, June, or December 2005

# ThinkCentre™ A50 (8149) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	EIDE Memory <sup>3</sup>	EIDE disk	EIDE optical	Graphics	Chipset	Preload warranty <sup>1</sup>	Limited Global	Workhorse Entry	Avail date
A50	8149-41U	3x4	Pentium® 4	2.6	512KB	400		256MB	40GB <sup>2</sup>	CD	Extreme™ 2 GMCH	GV	XP Pro <sup>5</sup>	3/3 yr IOR	No	Jun 2004
A50	8149-11U	3x4	Pentium 4	2.8A	1MB	533		256MB	40GB	CD	Extreme 2 GMCH	GV	XP Pro	3/3 yr IOR	No	Jun 2004
A50	8149-14U	3x4	Pentium 4	2.8	512KB	400		256MB	40GB	CD	Extreme 2 GMCH	GV	XP Pro	3/3 yr IOR	No	Jun 2004
A50	8149-21U	4x4	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD	Extreme 2 GMCH	G	XP Pro	3/3 yr IOR	No	Jun 2004
A50	8149-31U	4x4	Pentium 4	3.2E	1MB	800	HT	256MB	40GB	CD	Extreme 2 GMCH	G	XP Pro	3/3 yr IOR	No	Jun 2004
A50	8149-24U	4x4	Pentium 4	3.0E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH	G	XP Pro	3/3 yr IOR	No	Oct 2004
A50	8149-33U	4x4	Pentium 4	3.2E	1MB	800	HT	512MB	40GB	CD	Extreme 2 GMCH	G	XP Pro	3/3 yr IOR	No	Nov 2004

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

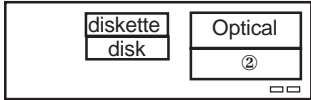
Positioning Processor Hyper-Threading L2 cache Implementation Memory - std/max <sup>8</sup> Memory Graphics EIDE disk EIDE controller EIDE cables CD SATA controller SATA cables Diskette drive Chipset Ports Audio Audio connectors Beeper Ethernet Security chip Keyboard Mouse Cooling fans Power supply	<b>Great technology and affordable prices</b> <b>Intel® Pentium 4 at 2.6, 2.8, 3.0, or 3.2GHz</b> with 400, 533, or 800MHz system bus Some: Hyper-Threading (HT) technology <b>512KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket <b>256MB std / 4GB max</b> Four 184-pin gold plated DIMM sockets / one socket used (two used on models 24U and 33U); 400/533MHz system bus: <b>PC2700 333MHz DDR1</b> (DDR-SDRAM); 800MHz: <b>PC3200 400MHz DDR1</b> ; All: non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable <b>Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 865G or GV GMCH / uses main memory (up to 64MB with 256MB+)</b> / 266MHz / DVMT / one 15-pin analog D-sub connector 40GB, ATA-100, 7200 rpm, rubber vibration dampening mounts Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) Two EIDE 80-conductor cables (one 2-drop cable to optical, one 1-drop cable to disk) / two EIDE connectors on systemboard 48X-20X <sup>4</sup> CD-ROM / EIDE Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 No SATA cables / two SATA connectors on systemboard 3.5" 1.44MB diskette drive <b>Intel 865G or 865GV chipset / 82865G or 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5)</b> for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / <b>SMSC® LPC47M233</b> Super I/O for diskette, parallel, serial, keyboard, mouse, temp sensor Front: two USB (Version 2.0) Back: four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec Back: microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm] One internal beeper 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN® None 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (power supply and processor fansink) 230 watts with variable speed fan / universal / manual switch	<b>Desktop</b>  Bay ① 5.25", HH 1.6" access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1" access, std diskette Bay ④ 3.5", SL 1", no access, std disk 3x4 models with 865GV chipset: Slot 1: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) 4x4 models with 865G chipset: Slot 1: full-length, full-height, 32-bit AGP 8X (1.5v) Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) <ul style="list-style-type: none"> <li>Business black color; 25.2 liters</li> <li>16.7" W X 16.3"D X 5.5"H</li> <li>425mm W X 414mm D X 140mm H</li> <li>22 to 25 lb (10.0 to 11.4 kg)</li> <li>Bay 1 and 2 in cage flips up (latched and pivoting)</li> <li>Bay 3 and 4 in cage flips up (latched and pivoting)</li> <li>Toolless rails for disk mounting</li> <li>Toolless cover removal; toolless AGP and PCI slots</li> </ul>	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Power Management 1.2</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>	<b>SECURITY</b> <ul style="list-style-type: none"> <li>U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>Security slot (for attachment of optional cable lock)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Diskette boot inhibit</li> <li>Boot without keyboard or mouse</li> <li>Diskette and disk I/O control</li> <li>Serial/parallel I/O control</li> </ul>
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Model 33U: Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> <ul style="list-style-type: none"> <li>Access IBM</li> <li>Rescue and Recovery™</li> <li>Update Connector™.15</li> <li>Adobe Reader</li> <li>PC-Doctor™ (diagnostics)</li> <li>Norton AntiVirus (OEM version)</li> </ul> <b>Downloadable</b> <ul style="list-style-type: none"> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul> <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	<b>Accessories</b> 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300 Multi-Burner Plus <sup>5</sup> (DVD±RW; internal) 73P3370 USB 2.0 Portable 40GB Hard Disk 22P7196 USB 2.0 Memory Key 512MB 22P9230 ThinkVision™ L150 15" Monitor (black) 6636AC1 ThinkVision L170p 17" Monitor (black) 6734HB0 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C170 17" (16.0" vis) (black) 673766N ThinkVision C190 19" (18.0" vis) (black) 673960N ThinkVision C220p 22" (20.0" vis) (black) 673560N Kensington® MicroSaver® Desktop Lock 06P3839 Enh Perf Wireless Keyboard and Mouse 73P4067 Enhanced Performance USB Keyboard 73P2620 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	Supports ThinkVantage™ technologies; visit <a href="http://ibm.com/thinkvantage">ibm.com/thinkvantage</a> <b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Limited onsite service, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time<sup>3</sup></li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3 year IOR 9x5, 4 hour response (ServicePac® part number 41L2734)</li> <li>3 year IOR 24x7, 4 hour response (ServicePac part number 41L2740)</li> </ul> </li> <li>Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>		

See footnotes for important warranty information  
 US models announced June 8, October 19, or November 16, 2004  
 US models withdrawn effective January or June 2005

# ThinkCentre® A50 (8177) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	EIDE disk	EIDE optical	Graphics in GMCH	Chipset	Preload warranty <sup>1</sup>	Limited Global	Workhorse Entry	Avail date
A50	8177-A3U	3x4	Celeron®	2.4	128KB	400	No	256MB	40GB <sup>2</sup>	CD	Extreme™ 2	GV XP Pro <sup>5</sup>	3/1 yr LOR	No	Jun 2004	
A50	8177-D1U	3x4	Celeron	2.6	128KB	400	No	256MB	40GB	CD	Extreme 2	GV XP Pro	3/1 yr LOR	No	Jun 2004	
A50	8177-B1U	3x4	Celeron D 325	2.53	256KB	533	No	256MB	40GB	CD	Extreme 2	GV XP Pro	3/1 yr LOR	No	Aug 2004	
A50	8177-D3U	3x4	Celeron D 330	2.66	256KB	533	No	256MB	40GB	CD	Extreme 2	GV XP Pro	3/1 yr LOR	No	Aug 2004	
A50	8177-E3U	3x4	Celeron D 335	2.80	256KB	533	No	256MB	40GB	CD	Extreme 2	GV XP Pro	3/1 yr LOR	No	Aug 2004	
A50	8177-E4U	3x4	Celeron D 340	2.93	256KB	533	No	256MB	40GB	CD	Extreme 2	GV XP Pro	3/1 yr LOR	No	Nov 2004	

Positioning Processor	<i>Great technology and affordable prices</i> <b>Intel® Celeron at 2.4 or 2.6GHz</b> with 400MHz system bus or <b>Intel Celeron D Processor 325 (2.53GHz), 330 (2.66GHz), 335 (2.80GHz), or 340 (2.93GHz)</b> with 533MHz system bus		<b>Desktop</b>
Hyper-Threading L2 cache Implementation	No Hyper-Threading (HT) technology support <b>128KB or 256MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket		 <p>Bay ① 5.25", HH 1.6" access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1" access, std diskette Bay ④ 3.5", SL 1", no access, std disk</p> <p>Slot 1: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 16.7" W X 16.3" D X 5.5" H</li> <li>• 425mm W X 414mm D X 140mm H</li> <li>• 22 to 25 lb (10.0 to 11.4 kg)</li> <li>• Bay 1 and 2 in cage flips up (latched and pivoting)</li> <li>• Bay 3 and 4 in cage flips up (latched and pivoting)</li> <li>• Toolless rails for disk mounting</li> <li>• Toolless cover removal; toolless AGP and PCI slots</li> </ul>
Memory - std/max <sup>8</sup> Memory	<b>256MB std / 4GB max</b> Four 184-pin gold plated DIMM sockets / one socket used / <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable		
Graphics	<b>Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 865GV GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</b>		
EIDE disk EIDE controller EIDE cables	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) Two EIDE 80-conductor cables (one 2-drop cable to optical, one 1-drop cable to disk) / two EIDE connectors on systemboard		
CD SATA controller SATA cables Diskette drive	48X-20X <sup>4</sup> CD-ROM / EIDE Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 No SATA cables / two SATA connectors on systemboard 3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865GV chipset / 82865GV Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor</b>		<b>SYSTEMS MANAGEMENT</b>
Ports	<i>Front:</i> two USB (Version 2.0) <i>Back:</i> four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Power Management 1.2</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.1-compliant</li> <li>• DMI 2.0-compliant</li> </ul>
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec <i>Back:</i> microphone-in (stereo), line-in (stereo), line-out (stereo) [all 3.5mm] One internal beeper		<b>SECURITY</b>
Audio connectors Beeper Ethernet	10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.3 / PXE / Wake on LAN® None		<ul style="list-style-type: none"> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (for attachment of optional cable lock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Diskette boot inhibit</li> <li>• Boot without keyboard or mouse</li> <li>• Diskette and disk I/O control</li> <li>• Serial/parallel I/O control</li> </ul>
Keyboard Mouse Cooling fans Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (power supply and processor fansink) 230 watts with variable speed fan / universal / manual switch		<b>LIMITED WARRANTY<sup>1</sup></b>
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>		
Microsoft® Windows® XP Professional	128MB PC2700 CL2.5 NP DDR UDIMM	31P8854	<ul style="list-style-type: none"> <li>↔ 3 year parts / 1 year labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ 1st year: limited onsite service, 8 am - 5 pm, Mon-Fri coverage excl holidays, 2nd business day response time<sup>3</sup></li> <li>↔ 2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3 year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9181)</li> <li>• 3 year LOR 9x5, 4 hour response (ThinkPlus part number 41C9183)</li> <li>• 3 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9182)</li> <li>• 4 year LOR 9x5, Next Business Day (ThinkPlus part number 41C9184)</li> <li>• 4 year LOR 9x5, 4 hour response (ThinkPlus part number 41C9185)</li> <li>• 4 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9186)</li> </ul> </li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 1-800-IBM-SERV (426-7378)</li> </ul>
- Model E4U: Service Pack 2	256MB PC2700 CL2.5 NP DDR UDIMM	31P8855	
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2700 CL2.5 NP DDR UDIMM	31P8856	
<b>Preloaded</b>	1GB PC2700 CL2.5 NP DDR UDIMM	31P8857	
• Access Program	80GB IDE Disk ATA-100 (7200 rpm)	09N4248	
• Rescue and Recovery™	120GB IDE Disk ATA-100 (7200 rpm)	09N4249	
• Update Connector™.15	160GB Serial ATA150 Disk (7200 rpm)	09N4254	
• Adobe Reader	48X/32X/48X Max <sup>4</sup> CD-RW internal (black)	22P7042	
• PC-Doctor™ (diagnostics)	48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black)	73P3300	
• Norton AntiVirus (OEM version)	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370	
<b>Downloadable</b>	USB 2.0 Portable 80GB Hard Disk	40Y8726	
• Software Delivery Assistant	USB 2.0 Memory Key 1GB	40Y7421	
• System Migration Assistant	ThinkVision® L151 15" Monitor (black)	9205AB2	
• IBM Director Agent	ThinkVision L151p 15" Monitor (black)	9205HB2	
<b>License</b> - CD not included	ThinkVision L171 17" Monitor (black)	9417AB1	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision L171p 17" Monitor (black)	9417HB7	
	ThinkVision L191p 19" Monitor (black)	9419HB7	
	ThinkVision L200p 20.1" Monitor (black)	6736HC9	
	ThinkVision C170 17" (16.0" vis) (black)	6737P6N	
	ThinkVision C190 19" (18.0" vis) (black)	6739P0N	
	Kensington® MicroSaver® Desktop Lock	06P3839	
	Enh Perf Wireless Keyboard and Mouse	73P4067	
	Enhanced Performance USB Keyboard	73P2620	
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		

See footnotes for important warranty information  
US models announced June 8, August 10, or November 16, 2004  
US models withdrawn effective June or December 2005

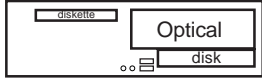


# ThinkCentre™ A50 (8419) - Express (February 2004) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>5</sup>	EIDE disk	EIDE optical	Graphics	Ethernet	Preload	Workhorse Gbl, Entry	Avail date
A50	8419-35U	2x3	Pentium® 4	2.8E	1MB	800	HT	256MB	40GB <sup>2</sup>	CD	Extreme™ 2 GMCH	10/100	XP Pro <sup>5</sup>	No	Feb 2004
A50	8419-36U	2x3	Pentium 4	2.8E	1MB	800	HT	256MB	40GB	CD-RW	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004
A50	8419-41U	2x3	Pentium 4	3.0E	512KB	533	HT	256MB	40GB	CD	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004
A50	8419-42U	2x3	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD-RW	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004
A50	8419-43U	2x3	Pentium 4	3.0E	1MB	800	HT	256MB	40GB	CD	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004
A50	8419-51U	2x3	Pentium 4	3.2	512KB	800	HT	256MB	40GB	CD	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004
A50	8419-52U	2x3	Pentium 4	3.2	512KB	800	HT	256MB	40GB	CD-RW	Extreme 2 GMCH	10/100	XP Pro	No	Feb 2004

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

Positioning Processor	<i>Smallest ThinkCentre desktop without compromise</i> <b>Intel® Pentium 4 at 2.8, 3.0, 3.06, or 3.2GHz</b> with 533 or 800MHz system bus		
Hyper-Threading L2 cache Implementation	Hyper-Threading (HT) technology support <b>512KB or 1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket		
Memory - std/max <sup>8</sup> Memory - sockets Memory - type	<b>256MB std / 2GB max</b> Two 184-pin gold plated DIMM sockets / one socket used <b>PC2700 333MHz DDR1</b> (DDR-SDRAM) / non-parity / industry std / unbuffered / CAS latency 2.5 (CL2.5) / dual channel capable		<b>Small Form Factor</b> Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) • Business black color; metal case; 9.4 liters • 12.2" W X 14.1" D X 3.3" H • 310mm W X 358mm D X 85mm H • With vertical stand: 5.0" W X 14.6" D X 13.6" H • With vertical stand: 126mm W X 370mm D X 346mm H • 18.0 to 20.0 lb (8.1 to 9.1 kg) • Bays 1 and 2/3 flip up (latched and pivoting) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, diskette drive, optical drive removal • Two PCI slots on riser card • Toolless PCI slots and riser card retention • Toolless systemboard retention • Steel chassis supports 100 lb (45kg) monitor on top • System stand for vertical orientation
Graphics	<b>Integrated Intel Extreme™ Graphics 2 / Direct AGP / in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector</b>		<b>SYSTEMS MANAGEMENT</b> • PC 2001-compliant • Advanced Power Management 1.2 • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.1-compliant • DMI 2.0-compliant
EIDE disk EIDE controller EIDE cables	<b>40GB</b> , ATA-100, 7200 rpm, rubber vibration dampening mounts Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) One EIDE 80-conductor cable (one 2-drop cable to optical and disk) / one EIDE connector on systemboard <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE <i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE		
CD CD-RW SATA controller SATA cables Diskette drive	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 No SATA cables / two SATA connectors on systemboard 3.5" 1.44MB diskette drive		
Chipset	<b>Intel 865G chipset / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5) for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor</b>		
Ports	<i>Front:</i> two USB (Version 2.0), microphone in (stereo), headphone out (stereo) <i>Back:</i> six USB (Version 2.0), two serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		<b>SECURITY</b> • U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (for attachment of optional cable lock) • Power-on password • Administrator password • Boot sequence control • Diskette boot inhibit • Boot without keyboard or mouse • Diskette and disk I/O control • Serial/parallel I/O control
Audio connectors Audio	<i>Back:</i> line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec		
Speaker Ethernet	One internal speaker for business audio 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.2 / PXE / Wake on LAN®		
Modem Security chip	None None		
Keyboard Mouse Cooling fans Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (front fan for passive heatsink, power supply) 200 watts with variable speed fan / universal / manual switch		
Preload with Windows XP Professional <sup>5</sup>	<b>Accessories</b> 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Portable 40GB Hard Disk 22P7199 iomega® Zip 750MB USB 2.0 Ext Drive 22P7099 USB 2.0 Memory Key 512MB 22P9230 NVIDIA Quadro4 200NVS Dual Head 33L3543 ThinkVision L150p 15" Monitor (black) 6636HB1 ThinkVision L170 17" Monitor (black) 6734AB0 ThinkVision L170p 17" Monitor (black) 6734HB0 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C170 17" (16.0" vis) (black) 673766N ThinkVision C190 19" (18.0" vis) (black) 673960N ThinkVision C220p 22" (20.0" vis) (black) 673560N Belkin® 800VA UPS with AVR technology 31P7662 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		
Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)	<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ 3 year parts / 1 year labor ⇨ International Warranty Service <sup>9</sup> ⇨ 1st year: limited onsite service, 8 am - 5 pm, Mon - Fri coverage excl holidays, 2nd business day response time <sup>3</sup> ⇨ 2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378) ⇨ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3 year IOR 9x5, Next Business Day (ServicePac® part number 30L9199) • 3 year IOR 9x5, 4 hour response (ServicePac part number 41L2732) • 3 year IOR 24x7, 4 hour response (ServicePac part number 31L2724) • 4 year IOR 9x5, Next Business Day (ServicePac part number 69P9158) • 4 year IOR 9x5, 4 hour response (ServicePac part number 69P9159) • 4 year IOR 24x7, 4 hour response (ServicePac part number 69P9160) ⇨ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup>		

See footnotes for important warranty information  
US models announced February 10, 2004  
US models withdrawn effective August 2004, January 2005, or June 2005

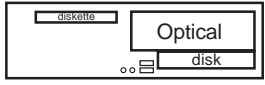
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(8419F) June 2005

# ThinkCentre™ A50 (8419) - Express (September 2004) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>6</sup>	Memory type	EIDE disk	EIDE optical	Graphics in GMCH	Ethernet	Preload	Workhorse Gbl, Entry	Avail date
A50	8419-37U	2x3	Pentium® 4	2.8A	1MB	533		512MB	PC2700	40GB <sup>2</sup>	CD	Extreme™ 2	10/100	XP Pro <sup>5</sup>	No	Oct 2004
A50	8419-44U	2x3	Pentium 4	3.0E	1MB	800	HT	512MB	PC3200	40GB	CD	Extreme 2	10/100	XP Pro	No	Oct 2004
A50	8419-53U	2x3	Pentium 4	3.2E	1MB	800	HT	256MB	PC3200	40GB	CD	Extreme 2	10/100	XP Pro	No	Oct 2004
A50	8419-54U	2x3	Pentium 4	3.2E	1MB	800	HT	512MB	PC3200	40GB	Combo	Extreme 2	10/100	XP Pro	No	Oct 2004
A50	8419-61U	2x3	Pentium 4	3.4E	1MB	800	HT	512MB	PC3200	40GB	Combo	Extreme 2	10/100	XP Pro	No	Oct 2004

**These small and medium business (SMB) models are part of the US ThinkCentre Express Program**

Positioning Processor	Smallest ThinkCentre desktop without compromise <b>Intel® Pentium 4 at 2.8, 3.0, 3.2, or 3.4GHz</b> with 533 or 800MHz system bus											<b>Small Form Factor</b>		
Hyper-Threading L2 cache Implementation	Some: Hyper-Threading (HT) technology support <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-PGA2 in mPGA478B socket											Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk		
Memory std/max <sup>8</sup> Memory	<b>256MB std / 2GB max</b> Two 184-pin gold plated DIMM sockets / one socket used 533MHz system bus: <b>PC2700 333MHz DDR1 (CL2.5)</b> ; 800MHz system bus: <b>PC3200 400MHz DDR1 (CL3)</b> ; All: non-parity / industry std / unbuffered / dual channel capable											Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)		
Graphics	<b>Integrated Intel Extreme™ Graphics 2 / Direct AGP /</b> in 865G GMCH / uses main memory (up to 64MB with 256MB+) / 266MHz / DVMT / one 15-pin analog D-sub connector											• Business black color; metal case; 9.4 liters • 12.2" W X 14.1"D X 3.3"H • 310mm W X 358mm D X 85mm H • With vertical stand: 5.0" W X 14.6"D X 13.6"H • With vertical stand: 126mm W X 370mm D X 346mm H • 18.0 to 20.0 lb (8.1 to 9.1 kg) • Bays 1 and 2/3 flip up (latched and pivoting) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, diskette drive, optical drive removal • Two PCI slots on riser card • Toolless PCI slots and riser card retention • Toolless systemboard retention • Steel chassis supports 100 lb (45kg) monitor on top • System stand for vertical orientation		
EIDE disk EIDE controller EIDE cables CD Combo SATA controller SATA cables Diskette drive	40GB, ATA-100, 7200 rpm, rubber vibration dampening mounts Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH5) One EIDE 80-conductor cable (one 2-drop cable to optical and disk) / one EIDE connector on systemboard Some: 48X-20X <sup>4</sup> CD-ROM / EIDE Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo / EIDE Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH5 No SATA cables / two SATA connectors on systemboard 3.5" 1.44MB diskette drive													
Chipset	<b>Intel 865G chipset / 82865G Graphics Memory Controller Hub (GMCH) / 82801EB I/O Controller Hub (ICH5)</b> for PCI 2.3 bus, ATA-100 EIDE, SATA150, ethernet MAC, USB, Low Pin Count Interface / Firmware Hub / SMSC® LPC47M233 Super I/O for diskette, parallel, serial, keyboard, mouse, temperature sensor											<b>SYSTEMS MANAGEMENT</b>		• PC 2001-compliant • Advanced Power Management 1.2 • Advanced Configuration and Power Interface (ACPI) 2.0b • SMBIOS 2.3.1-compliant • DMI 2.0-compliant
Ports	Front: two USB (Version 2.0), microphone in (stereo), headphone out (stereo) Back: six USB (Version 2.0), two serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)													
Audio connectors Audio Speaker Ethernet	Back: line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH5) / AC '97 interface / ADI1981B codec One internal beeper 10/100 ethernet on planar / ICH5 (MAC layer) with Intel 82562 PHY (physical layer) / Intel Pro/100VE Network Connection / 32-bit PCI 2.2 / PXE / Wake on LAN®													<b>SECURITY</b>
Modem Security chip	None None													• U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (for attachment of optional cable lock) • Power-on password • Administrator password • Boot sequence control • Diskette boot inhibit • Boot without keyboard or mouse • Diskette and disk I/O control • Serial/parallel I/O control
Keyboard Mouse Cooling fans Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (front fan for passive heatsink, power supply) 200 watts with variable speed fan / universal / manual switch													
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>											Supports ThinkVantage™ technologies		
Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)	533MHz: 128MB PC2700 CL2.5 NP DDR 31P8854 533MHz: 256MB PC2700 CL2.5 NP DDR 31P8855 533MHz: 512MB PC2700 CL2.5 NP DDR 31P8856 533: 1GB PC2700 CL2.5 NP DDR UDIMM 31P8857 800MHz: 128MB PC3200 CL3 NP DDR1 22P9271 800MHz: 256MB PC3200 CL3 NP DDR1 73P2685 800MHz: 512MB PC3200 CL3 NP DDR1 73P2686 800: 1GB PC3200 CL3 NP DDR1 UDIMM 22P9272 80GB IDE Disk ATA-100 (7200 rpm) 09N4248 120GB IDE Disk ATA-100 (7200 rpm) 09N4249 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black) 73P3300 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 512MB 22P9230 NVIDIA Quadro 4 200NV5 Dual Head 33L3543 ThinkVision™ L150p 15" Monitor (black) 6636HB1 ThinkVision L170 17" Monitor (black) 6734AB0 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HB0 ThinkVision C170 17" (16.0" vis) (black) 673766N ThinkVision C190 19" (18.0" vis) (black) 673960N Enh Perf Wireless Keyboard and Mouse 73P4067 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>													<b>LIMITED WARRANTY<sup>1</sup></b>
<b>Preloaded</b>												↔ 3 year parts / 1 year labor ↔ International Warranty Service <sup>9</sup> ↔ 1st year: limited onsite service, 8 am - 5 pm, Mon - Fri coverage excl holidays, 2nd business day response time <sup>3</sup> ↔ 2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378) ↔ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3 year IOR 9x5, Next Business Day (ServicePac® part number 30L9199) • 3 year IOR 9x5, 4 hour response (ServicePac part number 41L2732) • 3 year IOR 24x7, 4 hour response (ServicePac part number 31L2724) • 4 year IOR 9x5, Next Business Day (ServicePac part number 69P9158) • 4 year IOR 9x5, 4 hour response (ServicePac part number 69P9159) • 4 year IOR 24x7, 4 hour response (ServicePac part number 69P9160) ↔ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup>		
<b>Downloadable</b>														
<b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client														

See footnotes for important warranty information  
US models announced September 21, 2004  
US models withdrawn effective June 2005

# ThinkCentre® A51 (8424) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory*	SATA disk	EIDE optical	Graphics	Chipset	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
A51	8424-11U	2x3	Pentium® 4 520	2.8 1MB	800		256MB	40GB <sup>2</sup>	CD	GMA 900	915G	Sec	No	XP Pro <sup>5</sup>	No	Aug 2004
A51	8424-21U	2x3	Pentium 4 530	3.0 1MB	800		256MB	40GB	CD	GMA 900	915G	Sec	No	XP Pro	No	Aug 2004
A51	8424-36U	2x3	Pentium 4 521	2.8 1MB	800	EM64T	256MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	July 2005
A51	8424-37U	2x3	Pentium 4 531	3.0 1MB	800	EM64T	256MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	July 2005
A51	8424-3DU	2x3	Pentium 4 531	3.0 1MB	800	EM64T	512MB	80GB	CD	GMA 900	915G	Sec	Yes	XP Pro	Educ	July 2005

Positioning	<i>Great technology and affordable prices</i>										<b>Small Form Factor</b>					
Processor	<b>Intel® Pentium 4 Processor 520, 521, 530, 531</b> with Hyper-Threading technology and 800MHz system bus										<p>Bay ① 3.5", slim .5", access, std or opt diskette Bay ② 5.25", HH 1.6", access, std or opt optical Bay ③ 3.5", SL 1", no access, std disk</p>					
Proc features	521/531: Extended Memory 64 Technology and Execute Disable Bit										Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (slot x16 length so supports optional ADD2 card)					
L2 cache	<b>1MB</b> std and max / ECC / full speed															
Implementation	Processor and L2 cache in LGA775 socket															
Memory std/max*	<b>256 or 512MB</b> std / 2GB max															
Memory	Two 184-pin gold plated DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable										<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.0 to 20.0 lb (8.1 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand for vertical orientation</li> </ul>					
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915GV or G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector															
SATA disk	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts															
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6															
SATA cables	One SATA cable (one 1-drop to disk) / two SATA connectors on systemboard															
EIDE CD	48X-20X <sup>4</sup> CD-ROM / EIDE															
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)															
EIDE cables	one 1-drop EIDE 80-conductor cable to optical / one EIDE connector on systemboard															
Diskette drive	3.5" 1.44MB diskette drive															
Chipset	<b>Intel 915GV or G Express Chipset</b> / 82915GV/G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log										<b>SYSTEMS MANAGEMENT</b>					
Ports	<b>Front:</b> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <b>Back:</b> six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• ACPI 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>					
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec										<b>SECURITY</b>					
Audio connectors	<b>Back:</b> line-in (stereo), line-out (stereo) [both 3.5mm]										<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• <i>Some:</i> cover intrusion switch and keylock on chassis</li> </ul>					
Speaker	One internal speaker for business audio															
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot															
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant															
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black															
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black															
Cooling fans	Three variable speed fans (two in front; power supply fan in back)															
Power supply	225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs															

<b>Preload with Windows XP Professional<sup>5</sup></b>			<b>Accessories</b>		
Microsoft® Windows® XP Professional		128MB PC3200 CL3 NP DDR1 UDIMM			22P9271
- Disk-to-Disk Recovery (in hidden protected area)		256MB PC3200 CL3 NP DDR1 UDIMM			73P2685
<b>Preloaded</b>		512MB PC3200 CL3 NP DDR1 UDIMM			73P2686
• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package**		1GB PC3200 CL3 NP DDR1 UDIMM			22P9272
• Access Program		80GB Serial ATA150 Disk (7200 rpm)			09N4253
• Rescue and Recovery™		160GB Serial ATA150 Disk (7200 rpm)			09N4254
• Adobe Reader		48X/32X/48X Max <sup>4</sup> CD-RW internal (black)			22P7042
• Norton AntiVirus (OEM version)		Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)			73P3370
• PC-Doctor™ (diagnostics)		USB Fingerprint Reader			73P4774
<b>Downloadable</b>		USB 2.0 Portable Multi-Burner Drive			22P9163
• Client Security Software		USB 2.0 Portable 80GB Hard Disk			40Y8726
• Software Delivery Assistant		USB 2.0 Memory Key 1GB			40Y7421
• System Migration Assistant		ThinkVision® L151 15" Monitor (black)			9205AB2
• IBM Director Agent		ThinkVision L151p 15" Monitor (black)			9205HB2
<b>License</b> - CD not included		ThinkVision L171 17" Monitor (black)			9417AB1
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client		ThinkVision L171p 17" Monitor (black)			9417HB7
		ThinkVision L191p 19" Monitor (black)			9419HB7
		ThinkVision L200p 20.1" Monitor (black)			6736HC9
		ThinkVision C170 17" (16.0" vis) (black)			6737P6N
		ThinkVision C190 19" (18.0" vis) (black)			6739P0N
		DVI-I PCIe Connection Adapter (ADD2)			73P2516
		Belkin® 800VA UPS with AVR technology			31P7662
		Kensington® MicroSaver® Desktop Lock			06P3839
		Enhanced Performance USB Keyboard			73P2620
		Preferred Pro USB Fingerprint Keyboard			73P4730
		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>			
**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works					
<b>LIMITED WARRANTY<sup>1</sup></b>					
↪ <b>3 year parts / 1 year labor</b>					
↪ <b>International Warranty Service<sup>9</sup></b>					
↪ <b>1st year: Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>; 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)</b>					
↪ <b>2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378)</b>					
↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>					
• <b>3 year IOR 9x5, Next Business Day (ThinkPlus™ part number 41C9181)</b>					
• <b>3 year IOR 9x5, 4 hour response (ThinkPlus part number 41C9183)</b>					
↪ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>					
↪ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b>					

See footnotes for important warranty information  
US models announced August 3, 2004 or July 19, 2005  
US models withdrawn effective August or December 2005

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(8424) December 2005

# ThinkCentre® A51 (8425) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz cache	Bus MHz	EM64T	Memory*	SATA disk	EIDE optical	Graphics	Chipset	Security chip	Cover switch	Preload	Workhorse Global, Educ	Avail date
A51	8425-1GU	2x3	Pentium® 4 515	2.93	1MB	533	256MB	40GB <sup>2</sup>	CD	GMA 900	915GV	Sec	No	XP Pro <sup>5</sup>	No	May 2005
A51	8425-27U	2x3	Pentium 4 530	3.0	1MB	800	512MB	80GB	CD	GMA 900	915G	Sec	No	XP Pro	<b>Educ</b>	May 2005
A51	8425-28U	2x3	Pentium 4 530	3.0	1MB	800	256MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	May 2005
A51	8425-38U	2x3	Pentium 4 540	3.2	1MB	800	512MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	May 2005
A51	8425-47U	2x3	Pentium 4 550	3.4	1MB	800	512MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	May 2005
A51	8425-2RU	2x3	Pentium 4 531	3.0	1MB	800	EM64T 256MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	July 2005
A51	8425-2TU	2x3	Pentium 4 531	3.0	1MB	800	EM64T 512MB	80GB	CD	GMA 900	915GV	Sec	No	XP Pro	<b>Educ</b>	July 2005
A51	8425-3HU	2x3	Pentium 4 541	3.2	1MB	800	EM64T 512MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	July 2005
A51	8425-4AU	2x3	Pentium 4 551	3.4	1MB	800	EM64T 512MB	40GB	CD	GMA 900	915GV	Sec	No	XP Pro	No	July 2005

*These small and medium business (SMB) models are part of the US ThinkCentre Express Program*

Positioning	<i>Great technology and affordable prices</i>							<b>Small Form Factor</b>																																																																									
Processor	<b>Intel® Pentium 4 Processor 515, 530, 531, 540, 541, 550, 551</b> with Hyper-Threading technology (except 515) and 533/800MHz bus <i>531/541/551: Extended Memory 64 Technology, Execute Disable Bit</i>							Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk		Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (slot x16 length so supports optional ADD2 card)																																																																							
Proc features	<b>1MB</b> std and max / ECC / full speed							Memory std/max <sup>5</sup> <b>256</b> or <b>512MB</b> std / 2GB max		• Business black color; metal case • 12.2" W X 14.1"D X 3.3"H (3.4"H with feet) • 310mm W X 358mm D X 85mm H (87.5mm H with feet) • With vertical stand: 5.0" W X 15.4"D X 13.6"H • With vertical stand: 127mm W X 390mm D X 346mm H • 18.0 to 20.0 lb (8.1 to 9.1 kg) • Bays 1 and 2/3 flip up (latched and pivoting) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, diskette drive, optical drive removal • Two slots on riser card (PCI and PCI Express x1) • Toolless PCI slots and riser card retention • Toolless systemboard retention • Steel chassis supports 100 lb (45kg) monitor on top • System stand for vertical orientation																																																																							
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket							Two 184-pin gold plated DIMM sockets / one socket used / <b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable		• PC 2001-compliant • ACPI 2.0b • SMBIOS 2.3.4-compliant • DMI 2.0-compliant • Asset ID <sup>19</sup> (system specific info in chip)																																																																							
Memory	<b>PC3200 400MHz DDR1</b> / CAS latency 3 (CL3) / non-parity / industry standard / unbuffered / dual channel capable							Memory		<b>SECURITY</b> • Security chip (see information on left) • U-bolt anchoring feature (U-bolt is optional; supports optional padlock) • Security slot (in rear for attachment of optional Kensington Microsaver cable) • Power-on password • Administrator password • Hard disk password (user and master) • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Disk, removable, and network device boot password • Diskette write protect • Front USB port disablement																																																																							
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915 GMCH / 333MHz / one 15-pin analog connector							Chipset		<b>LIMITED WARRANTY!</b> ⇒ <b>1 year parts and labor</b> ⇒ <b>International Warranty Service<sup>9</sup></b> ⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3 year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9191) • <b>3 year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188) ⇒ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b>																																																																							
SATA disk	<b>40</b> or <b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts							Ports		Front: two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] Back: six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																																																																							
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6							Audio		Integrated digital audio / SoundMAX® Cadenza / AC '97 interface / ADI1981B codec																																																																							
SATA cables	One SATA cable (one 1-drop to disk) / two planar SATA connectors							Audio connectors		Back: line-in (stereo), line-out (stereo) [both 3.5mm]																																																																							
EIDE CD	48X-20X <sup>4</sup> CD-ROM / EIDE							Speaker		One internal speaker for business audio																																																																							
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)							Ethernet		10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot																																																																							
EIDE cables	one 1-drop EIDE 80-conductor cable to optical / one EIDE connector on systemboard							Security chip		<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant																																																																							
Diskette drive	3.5" 1.44MB diskette drive							Keyboard		104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																																																																							
Chipset	<b>Intel 915GV or 915G Express Chipset</b> / 82915GV or G Graphics Memory Controller Hub (GMCH) / 82801FB ICH6 for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, LPC interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log							Mouse		Optical Wheel Mouse (USB only), 400 dpi, black																																																																							
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black							Cooling fans		Three variable speed fans (two in front; power supply fan in back)																																																																							
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black							Power supply		225 watts with variable speed fan / universal / manual switch / two diagnostic LEDs																																																																							
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See footnotes for important warranty information  
US models announced April 19 or July 19, 2005  
US models withdrawn effective August or December 2005

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(8425) December 2005

# ThinkCentre™ A51p (8420) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics	Security chip	Workhorse Preload	Global, Educ	Avail date
<b>A51p</b>	8420-24U	4x4	Pentium® 4 530	3.0 1MB	800	HT	512MB	40GB <sup>2</sup>	CD	GMA 900 GMCH	Sec	XP Pro <sup>5</sup>	No	Nov 2004
<b>A51p</b>	8420-35U	4x4	Pentium 4 540	3.2 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec	XP Pro	No	Nov 2004

Positioning Processor	<i>Great technology and affordable prices</i> <b>Intel® Pentium 4 Processor 530 (3.0GHz) or 540 (3.2GHz)</b> with 800MHz system bus		<b>Desktop</b>	
Hyper-Threading L2 cache Implementation	Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket			
Memory std/max <sup>8</sup> Memory	<b>512MB std</b> / 4GB max Four 240-pin gold plated DIMM sockets / two sockets used / <b>PC2-3200 400MHz DDR2</b> / non-parity / industry std / unbuffered / CAS latency 3 (CL3) / dual channel capable		Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6", access, open Bay ④ 3.5", SL 1", no access, std disk  Slot 1: full-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector		• Business black color; 24 liters • Supports up to 100 lb monitor on top of metal cover • 17.4" W X 15.7" D X 5.5" H • 442mm W X 400mm D X 140mm H • 24 to 31 lb (11 to 14 kg) • Bay 1, 2, 3, and 4 can flip up (latched and pivoting) • Toolless install and removal of disk, optical, diskette • Toolless install and removal of cover • Toolless install and removal of adapter cards	
SATA disk SATA controller SATA cables	<b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard		<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>	
EIDE CD EIDE controller EIDE cables	48X-20X <sup>4</sup> CD-ROM / EIDE Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar			
Diskette drive	3.5" 1.44MB diskette drive			
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log			
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec			
Audio connectors Beeper Ethernet	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm] One internal beeper 10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot			
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / hardware key storage / multi-factor authentication / local file encryption / in NS PC8375T chip / TCG-compliant			
Keyboard Mouse Cooling fans Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (front and power supply) 310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs		Supports ThinkVantage™ technologies; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>  <b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3 year parts / 1 year labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ 1st year: Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>; 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)</li> <li>⇒ 2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3 year IOR 9x5, Next Business Day (ServicePac® part number 30L9199)</li> </ul> </li> <li>⇒ Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>			
Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 160GB Serial ATA150 Disk (7200 rpm) 09N4254 48X/32X/48X Max <sup>4</sup> CD-RW internal (black) 22P7042 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 ThinkVision™ L150 15" Monitor (black) 6636AC1 ThinkVision L170p 17" Monitor (black) 6734HB0 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision C190 19" (18.0" vis) (black) 673960N Kensington® MicroSaver® Desktop Lock 06P3839 USB Fingerprint Reader 73P4774 USB 2.0 Combo Drive 73P4515 USB 2.0 Portable Multi-Burner Drive 22P9163 USB 2.0 Memory Key 512MB 22P9230 DVI-I PCIe Connection Graphic Adapter 73P2516 ATI® RADEON® X700 128MB Dual Head 73P2518 Belkin® 800VA UPS with AVR technology 31P7662 USB Optical Wheel Mouse (black) 06P4069 ScrollPoint Pro Optical Mouse (black) 31P8700 Optical 3-button ScrollPoint Mouse (black) 31P7405 Enh Perf Wireless Keyboard and Mouse 73P4067 Enhanced Performance USB Keyboard 73P2620 Preferred Pro USB Fingerprint Keyboard 73P4730 Preferred Pro USB Keyboard 73P5220 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>			
<b>Preloaded</b> • Access IBM • Rescue and Recovery™ • Update Connector™.15 • Adobe Reader • Norton AntiVirus (OEM Version) • PC-Doctor™ (diagnostics)	<b>Downloadable</b> • Client Security Software • Software Delivery Assistant • System Migration Assistant • IBM Director Agent			
<b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client				

See footnotes for important warranty information  
US models announced November 16, 2004  
US models withdrawn effective August 2005

# ThinkCentre™ A51p (8422) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>a</sup>	SATA disk	EIDE optical	Graphics	Security chip	Workhorse	Avail date
A51p	8422-14U	4x5	Pentium® 4 520	2.8 1MB	800	HT	256MB	80GB <sup>b</sup>	CD-RW	GMA 900 GMCH	Sec XP Pro <sup>5</sup>	No	Jun 2004
A51p	8422-15U	4x5	Pentium 4 520	2.8 1MB	800	HT	256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-22U	4x5	Pentium 4 530	3.0 1MB	800	HT	256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-24U	4x5	Pentium 4 530	3.0 1MB	800	HT	256MB	80GB	CD-RW	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-35U	4x5	Pentium 4 540	3.2 1MB	800	HT	256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-36U	4x5	Pentium 4 540	3.2 1MB	800	HT	256MB	80GB	CD-RW	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-43U	4x5	Pentium 4 550	3.4 1MB	800	HT	256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-52U	4x5	Pentium 4 560	3.6 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jun 2004
A51p	8422-55U	4x5	Pentium 4 560	3.6 1MB	800	HT	1GB	160GB	DVD±RW <sup>b</sup>	RADEON X600 PRO	Sec XP Pro	Educ	Jun 2004
A51p	8422-63U	4x5	Pentium 4 570	3.8 1MB	800	HT	512MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Nov 2004

Positioning Processor	<i>Great technology and affordable prices</i> <b>Intel® Pentium 4 Processor 520 (2.8GHz), 530 (3.0GHz), 540 (3.2GHz), 550 (3.4GHz), 560 (3.6GHz), or 570 (3.8GHz)</b> with 800MHz system bus	<b>Tower</b> <ul style="list-style-type: none"><li>• Business black color; 38.75 liters</li><li>• 6.9" W X 17.7"D X 19.4"H</li><li>• 175mm W X 450mm D X 492mm H</li><li>• 23 to 30 lb (10.5 to 13.5 kg)</li><li>• Handle on top front</li><li>• Rear disk bay pivots out to side</li><li>• Toolless disk, optical, diskette removal</li><li>• Toolless cover removal</li><li>• Toolless adapter slots</li><li>• Easy-to-service chassis design</li><li>• Front audio and USB ports</li></ul> 
Hyper-Threading L2 cache	Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed	Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, std disk
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)
Memory std/max <sup>a</sup> Memory	<b>256MB, 512MB, or 1GB std / 4GB max</b> Four 240-pin gold plated DIMM sockets / one socket used (two used on models 55U and 63U) / <b>PC2-3200 400MHz DDR2</b> / non-parity / ind std / unbuffered / CAS latency 3 (CL3) / dual channel capable	<b>SYSTEMS MANAGEMENT</b> <ul style="list-style-type: none"><li>• PC 2001-compliant</li><li>• Advanced Configuration and Power Interface (ACPI) 2.0b</li><li>• SMBIOS 2.3.4-compliant</li><li>• DMI 2.0-compliant</li><li>• Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li></ul>
Graphics (one of following)	<ul style="list-style-type: none"><li>• <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</li><li>• <b>ATI® RADEON® X600 PRO</b> / PCI Express x16 adapter / <b>128MB</b> 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support</li></ul>	<b>SECURITY</b> <ul style="list-style-type: none"><li>• Security chip (see information on left)</li><li>• One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none"><li>- Padlock loop (in rear for opt padlock)</li><li>- Security slot (in rear for optional Kensington Microsaver cable)</li><li>- No keylock</li></ul></li><li>• Power-on password</li><li>• Administrator password</li><li>• Hard disk password (user and master)</li><li>• Boot sequence control</li><li>• Boot without keyboard, mouse, diskette</li><li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li><li>• Disk, removable, and network device boot password</li><li>• Diskette write protect</li><li>• Front USB port disablement</li></ul>
SATA disk	<b>40, 80, or 160GB</b> / SATA150 7200 rpm / vibration dampening mounts	
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6	
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard	
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM / EIDE	
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW / EIDE	
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus / writes DVD-RAM, DVD-R, DVD-RW, DVD+R, DVD+RW, CD-R, CD-RW / reads many DVD and CD formats / EIDE	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)	
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar	
Diskette drive	3.5" 1.44MB diskette drive	
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log	
Ports	<i>Front:</i> two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm] <i>Back:</i> six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / AD11981B codec	
Audio connectors	<i>Back:</i> line-in (stereo), line-out (stereo) [both 3.5mm]	
Beeper	One internal beeper	
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot	
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Cooling fans	Two variable speed fans (front and power supply)	
Power supply	310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs	
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>	
Microsoft® Windows® XP Professional	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970	
- Model 63U: Service Pack 2	512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971	
- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972	
<b>Preloaded (only some listed)</b>	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973	
• <i>Some:</i> contains additional module with a specialized education preload image in the base preload package**	160GB Serial ATA150 Disk (7200 rpm) 09N4254	
• Access IBM	Multi-Burner Plus® (DVD±RW; internal) 73P3370	
• Rescue and Recovery™	ThinkVision L150 15" Monitor (black) 6636AC1	
• Norton AntiVirus (OEM Version)	ThinkVision L170p 17" Monitor (black) 6734HB0	
• PC-Doctor™ (diagnostics)	ThinkVision C190 19" (18.0" vis) (black) 673960N	
• RecordNow and DLA (CD-RW,DVD±RW)	Kensington® MicroSaver® Desktop Lock 06P3839	
• InterVideo WinDVD (DVD±RW)	USB 2.0 Portable Multi-Burner Drive 22P9163	
• InterVideo WinDVD Creator (DVD±RW)	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
• Simple Backup (for DVD±RW)	**Vital Source Technologies™ software used in educational institutions for electronic delivery of a variety of class materials including textbooks, rich media, and an existing library of published works	
		<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"><li>↔ <b>3 year parts / 1 year labor</b></li><li>↔ <b>International Warranty Service<sup>9</sup></b></li><li>↔ <b>1st year: Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)</b></li><li>↔ <b>2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378)</b></li><li>↔ <b>ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></b></li><li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li></ul>

See footnotes for important warranty information  
US models announced June 22 or November 16, 2004  
US models withdrawn effective August 2005

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(8422) August 2005

# ThinkCentre™ A51p (8423) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Memory <sup>8</sup>	SATA disk	EIDE optical	Security chip	FireWire adapter	Keyboard	Modem and speakers	Workhorse Preload	Global, Educ	Avail date	
<b>A51p</b>	8423-12U	4x5	Pentium® 4 520	2.8	256MB	40GB <sup>2</sup>	CD-RW	GMA 900	Sec	Preferred	Mod/spkrs	XP Home <sup>5</sup>	No	Jun 2004	
<b>A51p</b>	8423-13U	4x5	Pentium 4 520	2.8	256MB	40GB	CD	GMA 900	Sec	Preferred	Mod/spkrs	XP Home	No	Jun 2004	
<b>A51p</b>	8423-21U	4x5	Pentium 4 530	3.0	256MB	80GB	CD-RW	GMA 900	Sec	Preferred	Mod/spkrs	XP Home	No	Jun 2004	
<b>A51p</b>	8423-26U	4x5	Pentium 4 530	3.0	256MB	40GB	CD	GMA 900	Sec	Preferred	Mod/spkrs	XP Home	No	Jun 2004	
<b>A51p</b>	8423-31U	4x5	Pentium 4 540	3.2	256MB	80GB	CD-RW	X300 SE	Sec	Preferred	Mod/spkrs	XP Home	No	Aug 2004	
<b>A51p</b>	8423-32U	4x5	Pentium 4 540	3.2	512MB	160GB	Combo	X300 SE	Sec	Enhanced	Mod/spkrs	XP Home	No	Aug 2004	
<b>A51p</b>	8423-41U	4x5	Pentium 4 550	3.4	512MB	160GB	Combo	X300 PRO	Sec	Enhanced	Mod/spkrs	XP Home	No	Aug 2004	
<b>A51p</b>	8423-51U	4x5	Pentium 4 560	3.6	512MB	160GB	DVD±RW <sup>6</sup>	X600 PRO	Sec	1394	Enhanced	Mod/spkrs	XP Home	No	Jun 2004
<b>A51p</b>	8423-63U	4x5	Pentium 4 570	3.8	512MB	160GB	DVD±RW	X600 PRO	Sec	1394	Enhanced	Mod/spkrs	XP Home	No	Nov 2004

**Positioning Processor** *Great technology and affordable prices*  
**Intel® Pentium 4 Processor 520 (2.8GHz), 530 (3.0GHz), 540 (3.2), 550 (3.4GHz), 560 (3.6GHz), or 570 (3.8GHz)** with 800MHz bus  
**Hyper-Threading L2 cache** Hyper-Threading (HT) technology  
**Implementation** 1MB std and max / ECC / full speed  
 Processor and L2 cache in FC-LGA4 in LGA775 socket

**Memory std/max<sup>9</sup> Memory** 256MB or 512MB std / 4GB max  
 Four 240-pin gold plated DIMM sockets / one socket used (two used on 32U/41U/51U/63U) / **PC2-3200 400MHz DDR2** / non-parity / ind std / unbuffered / CAS latency 3 (CL3) / dual channel capable

**Graphics (one of following)**

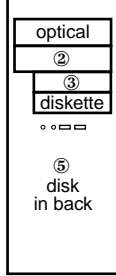
- **Intel Graphics Media Accelerator 900 (GMA 900)** / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector
- **ATI® RADEON® X300 SE** / PCI Express x16 adapter / 64MB 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support
- **ATI RADEON X300 PRO** / PCI Express x16 adapter / 64MB 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support
- **ATI RADEON X600 PRO** / PCI Express x16 adapter / 128MB 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support

**Tower**

- Business black color; 38.75 liters
- 6.9" W X 17.7" D X 19.4" H
- 175mm W X 450mm D X 492mm H
- 23 to 30 lb (10.5 to 13.5 kg)
- Handle on top front
- Rear disk bay pivots out to side
- Toolless disk, optical, diskette removal
- Toolless cover removal
- Toolless adapter slots
- Easy-to-service chassis design
- Front audio and USB ports

Bay ① 5.25", HH 1.6", access, std optical  
 Bay ② 5.25", HH 1.6", access, open  
 Bay ③ 3.5", SL 1", access, open  
 Bay ④ 3.5", SL 1", access, std diskette  
 Bay ⑤ 3.5", SL 1", no access, std disk

Slot 1: full-length, full-height, PCI Express x16-used in  
 Slot 2: half-length, full-height, PCI Express x1 some  
 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)-modem



**SATA disk** 40, 80, or 160GB / SATA150 7200 rpm / vibration dampening mounts  
**SATA controller** Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6  
**SATA cables** One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard  
**EIDE CD** Some: 48X-20X<sup>4</sup> CD-ROM / EIDE  
**EIDE CD-RW** Some: 48X/32X/48X Max<sup>4</sup> CD-RW / EIDE  
**EIDE Combo** Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE  
**EIDE DVD±RW** Some: DVD and CD burner / Multi-Burner Plus / writes + and - DVD formats / EIDE  
**EIDE controller** Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)  
**EIDE cables** One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar  
**Diskette drive** 3.5" 1.44MB diskette drive

**Chipset** Intel 915G Express Chipset / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log

**Ports** *Front:* two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm]  
*Back:* six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)

**Audio** Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1981B codec  
*Back:* line-in (stereo), line-out (stereo) [both 3.5mm]

**Audio connectors** External active speakers / Jazz Infinity® / 2-piece / 6 watts / black color  
**Speakers** Model 51U: FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, 4-pin port on front of system, no external cables included  
**IEEE 1394**

**Ethernet** 10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3  
**Modem** 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter  
**Security chip** Embedded Security Subsystem 2.0<sup>18</sup> / in NS PC8375T chip / TCG-compliant

**Keyboard** Some: 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black  
 Some: Enhanced Performance USB Keyboard, 2-port USB 2.0 hub, black

**Mouse** Optical Wheel Mouse (USB only), 400 dpi, black  
**Cooling fans** Two variable speed fans (front and power supply)  
**Power supply** 310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs

Preload with Windows XP Home <sup>5</sup>	Accessories
Microsoft® Windows® XP Home Edition	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970
- Model 63U: Service Pack 2	512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971
- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972
	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973
	160GB Serial ATA150 Disk (7200 rpm) 09N4254
<b>Preloaded</b> (only some listed)	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370
• Rescue and Recovery™	ThinkVision L150 15" Monitor (black) 6636AB1
• RecordNow and DLA (CD-RW, DVD±RW)	USB 2.0 Portable Multi-Burner Drive 22P9163
• InterVideo WinDVD (combo, DVD±RW)	USB 2.0 Memory Key 512MB 22P9230
• InterVideo WinDVD Creator (DVD±RW)	Other options at lenovo.com/options
• Simple Backup (for DVD±RW)	

**SYSTEMS MANAGEMENT**

- PC 2001-compliant
- Advanced Configuration and Power Interface (ACPI) 2.0b
- SMBIOS 2.3.4-compliant
- DMI 2.0-compliant
- Asset ID<sup>19</sup> (system specific info in chip accessed over network)

**SECURITY**

- Security chip (see information on left)
- One lock to secure both cover and entire system to fixed object:
  - Padlock loop (in rear for opt padlock)
  - Security slot (in rear for optional Kensington Microsaver cable)
  - No keylock
- Power-on password
- Administrator password
- Hard disk password (user and master)
- Boot sequence control
- Boot without keyboard, mouse, diskette
- USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
- Disk, removable, and network device boot password
- Diskette write protect
- Front USB port disablement

**LIMITED WARRANTY<sup>1</sup>**

- ⇨ 1 year parts and labor
- ⇨ International Warranty Service<sup>9</sup>
- ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)
- ⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup>
  - 3 year IOR 9x5, 4 hour response (ServicePac part number 54P1862)
- ⇨ Other ServicePac options at [ibm.com/services/us/its/pdf/wamomxeu.pdf](http://ibm.com/services/us/its/pdf/wamomxeu.pdf)
- ⇨ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)

See footnotes for important warranty information  
 US models announced June 22 or November 16, 2004  
 US models withdrawn effective August 2005

# ThinkCentre™ A51p (8427) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 GHz	Cache	Bus MHz	Hyper-Thread	Memory*	SATA disk	EIDE optical	Graphics	Security chip	Preload	Workhorse Global, Educ	Avail date
A51p	8427-12U	4x5	Pentium® 4 520	2.8	1MB	800	HT	256MB	40GB <sup>2</sup>	CD-RW	GMA 900 GMCH	Sec XP Pro <sup>5</sup>	No	Jun 2004	
A51p	8427-21U	4x5	Pentium 4 530	3.0	1MB	800	HT	256MB	40GB	CD-RW	GMA 900 GMCH	Sec XP Pro	No	Jun 2004	
A51p	8427-22U	4x5	Pentium 4 530	3.0	1MB	800	HT	512MB	80GB	Combo	RADEON X300 PRO	Sec XP Pro	No	Aug 2004	
A51p	8427-13U	4x5	Pentium 4 515	2.93	1MB	533		256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Jan 2005	
A51p	8427-32U	4x5	Pentium 4 540	3.2	1MB	800	HT	256MB	40GB	CD-RW	GMA 900 GMCH	Sec XP Pro	No	Nov 2004	
A51p	8427-33U	4x5	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	Combo	GMA 900 GMCH	Sec XP Pro	No	Nov 2004	
A51p	8427-41U	4x5	Pentium 4 550	3.4	1MB	800	HT	512MB	80GB	Combo	GMA 900 GMCH	Sec XP Pro	No	Nov 2004	
A51p	8427-15U	4x5	Pentium 4	2.66	1MB	533		256MB	40GB	CD	GMA 900 GMCH	Sec XP Pro	No	Feb 2005	

*These small and medium business (SMB) models are part of the US ThinkCentre Express Program*

Positioning Processor	Great technology and affordable prices <b>Intel® Pentium 4 Processor 2.66GHz, 515 (2.93GHz), 520 (2.8GHz), 530 (3.0), 540 (3.2GHz), or 550 (3.4GHz)</b> with 533 or 800MHz bus	<b>Tower</b>	
Hyper-Threading L2 cache Implementation	Some: Hyper-Threading (HT) technology <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	<ul style="list-style-type: none"> <li>Business black color; 38.75 liters</li> <li>6.9" W X 17.7" D X 19.4" H</li> <li>175mm W X 450mm D X 492mm H</li> <li>23 to 30 lb (10.5 to 13.5 kg)</li> <li>Handle on top front</li> <li>Rear disk bay pivots out to side</li> <li>Toolless disk, optical, diskette removal</li> <li>Toolless cover removal</li> <li>Toolless adapter slots</li> <li>Easy-to-service chassis design</li> <li>Front audio and USB ports</li> </ul>	
Memory std/max <sup>2</sup> Memory	<b>256MB or 512MB</b> std / 4GB max Four 240-pin gold plated DIMM sockets / one socket used (two used on models 22U/33U/41U) / <b>PC2-3200 400MHz DDR2</b> / non-parity / ind std / unbuffered / CAS latency 3 (CL3) / dual channel capable	<p>Bay ① 5.25", HH 1.6", access, std optical</p> <p>Bay ② 5.25", HH 1.6", access, open</p> <p>Bay ③ 3.5", SL 1", access, open</p> <p>Bay ④ 3.5", SL 1", access, std diskette</p> <p>Bay ⑤ 3.5", SL 1", no access, std disk</p> <p>Slot 1: full-length, full-height, PCI Express x16 - used in Slot 2: half-length, full-height, PCI Express x1 some Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</p>	
Graphics (one of following)	<ul style="list-style-type: none"> <li><b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</li> <li><b>ATI® RADEON® X300 PRO</b> / PCI Express x16 adapter / <b>64MB</b> 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support</li> </ul>	<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip accessed over network)</li> </ul>	
SATA disk SATA controller SATA cables	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard		
EIDE CD EIDE CD-RW EIDE Combo EIDE controller EIDE cables Diskette drive	<p>Some: 48X-20X<sup>4</sup> CD-ROM / EIDE</p> <p>Some: 48X/32X/48X Max<sup>4</sup> CD-RW / EIDE</p> <p>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo / EIDE Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)</p> <p>One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar</p> <p>3.5" 1.44MB diskette drive</p>		
Chipset	<b>Intel 915G Express Chipset</b> / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	<p>Front: two USB (Ver 2.0); microphone (stereo), headphone (stereo) [both 3.5mm]</p> <p>Back: six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>		
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / AD11981B codec		
Audio connectors Beeper Ethernet	<p>Back: line-in (stereo), line-out (stereo) [both 3.5mm]</p> <p>One internal beeper</p> <p>10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot</p>		
Security chip	<b>Embedded Security Subsystem 2.0<sup>18</sup></b> / in NS PC8375T chip / TCG-compliant		<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>
Keyboard Mouse Cooling fans Power supply	<p>104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p> <p>Optical Wheel Mouse (USB only), 400 dpi, black</p> <p>Two variable speed fans (front and power supply)</p> <p>310 watts with variable speed fan / universal / manual switch / two diagnostic LEDs</p>		
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>		
Microsoft® Windows® XP Professional	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970	
- Models 13U/32U/33U/41U: Service Pack 2	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971	
- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972	
<b>Preloaded</b>	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973	
• Access IBM	160GB Serial ATA150 Disk (7200 rpm)	09N4254	
• Rescue and Recovery™	Multi-Burner Plus <sup>5</sup> (DVD±RW; internal)	73P3370	
• Update Connector™.15	USB Fingerprint Reader	73P4774	
• Adobe Reader	USB 2.0 Portable Multi-Burner Drive	22P9163	
• Norton AntiVirus (OEM version)	USB 2.0 Portable 80GB Hard Disk	40Y8726	
• PC-Doctor™ (diagnostics)	USB 2.0 Memory Key 512MB	22P9230	
• RecordNow and DLA (CD-RW, combo models)	ThinkVision L171 17" Monitor (black)	9417AB1	
• InterVideo WinDVD (combo models)	ThinkVision L191p 19" Monitor (black)	9419HB7	
<b>Downloadable</b>	ThinkVision L200p 20.1" Monitor (black)	6736HB0	
• Client Security Software	ThinkVision C170 17" (16.0" vis) (black)	673766N	
• Software Delivery Assistant	ThinkVision C190 19" (18.0" vis) (black)	673960N	
• System Migration Assistant	ATI® RADEON® X700 128MB Dual Head	73P2518	
• IBM Director Agent	Belkin® 800VA UPS with AVR technology	31P7662	
	Kensington® MicroSaver® Desktop Lock	06P3839	
	Preferred Pro USB Fingerprint Keyboard	73P4730	
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		
			<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>1 year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1 year IOR 9x5, 4 hour response</b> (ServicePac<sup>6</sup> part number 54P1858)</li> </ul> </li> <li>↔ <b>Other ServicePac options at <a href="http://ibm.com/services/us/its/pdf/wamomxeu.pdf">ibm.com/services/us/its/pdf/wamomxeu.pdf</a></b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>

See footnotes for important warranty information  
US models announced June 22, 2004, November 16, 2004, or February 22, 2005  
US models withdrawn effective June or August 2005

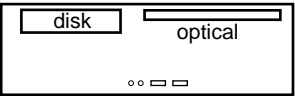


# ThinkCentre® A51 Ultra Small (8105) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x	Processor	L2	Bus Hyper-	Diskette	SATA	EIDE	Graphics	PCI	Cover	Key-	Workhorse	Gbl	Avail	
Type-model	bay		cache	Thread	Memory <sup>1</sup>	drive	optical	in GMCH	modem/switch	board	board	Preload	Education	date	
A51	8105-A1U 1x2	Celeron® 326	2.53 256K	533	256MB	None	80GB <sup>2</sup>	CD	GMA 900	Modem	Yes	EP	XP Home	No May 05	
A51	8105-A3U 1x2	Celeron 331	2.66 256K	533	256MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No May 05	
A51	8105-B2U 1x2	Celeron 336	2.80 256K	533	256MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No May 05	
A51	8105-91U 1x2	Celeron 336	2.80 256K	533	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No July 06	
A51	8105-2BU 1x2	Pentium® 4 521	2.80 1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No Jun 06
A51	8105-2HU 1x2	Pentium 4 524	3.06 1MB	533	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No July 06
A51	8105-2JU 1x2	Pentium 4 524	3.06 1MB	533	HT	512MB	None	80GB	Combo	GMA 900	No	No	Pref	XP Pro	No July 06
A51	8105-24U 1x2	Pentium 4 534	3.00 1MB	800	HT	256MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No May 05
A51	8105-26U 1x2	Pentium 4 531	3.00 1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Finger	XP Pro	No May 05
A51	8105-2MU 1x2	Pentium 4 531	3.00 1MB	800	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No July 06
A51	8105-33U 1x2	Pentium 4 541	3.20 1MB	800	HT	512MB	None	40GB	CD	GMA 900	No	No	Pref	XP Pro	No May 05
A51	8105-35U 1x2	Pentium 4 541	3.20 1MB	800	HT	512MB	None	80GB	Combo	GMA 900	No	No	Finger	XP Pro	No May 05
A51	8105-3HU 1x2	Pentium 4 541	3.20 1MB	800	HT	512MB	None	80GB	CD	GMA 900	No	No	Pref	XP Pro	No July 06

These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning	Smallest ThinkCentre desktop without compromise	Ultra Small	
Processor	Intel® Celeron D Processor 326, 331, 336 with 533MHz bus or Intel Pentium 4 Processor 521, 524, 531, or 541 with 533MHz or 800MHz system bus		
Proc features	All: Extended Memory 64 Technology, Execute Disable Bit	Bay ① 3.5", SL 1", access, std disk (desktop)	
Hyper-Threading	Some: Hyper-Threading (HT) technology	Bay ② 5.25", "slim .5", access, std optical (notebook)	
L2 cache	256KB or 1MB std and max / ECC / full speed	* Optical bay is Ultrabay™ Enhanced 12.5mm high (supports select ThinkPad®-based Ultrabay Enhanced [12.5mm high] and Ultrabay Slim [9.5mm high] devices)	
Socket	Processor and L2 cache in FC-LGA4 in LGA775 socket	Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)	
Memory - std/max <sup>8</sup>	256 or 512MB std / 4GB max		
Memory	Two 240-pin gold plated DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	• Up to 75% less space than desktop chassis • Business black color; metal case • 10.8" W X 10.8" D X 3.4" H • 275mm W X 275mm D X 87.5mm H • 13.2 to 14.0 lb (6.0 to 6.4 kg) • Toolless cover flips up and tilts backward on rear hinges • Toolless disk and optical drive removal • Bays 1 and 2 flip up (latched and pivoting) • Toolless PCI slot and riser card retention • Steel chassis supports 100 lb (45kg) monitor on top	
Graphics	Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector		
SATA disk	40 or 80GB / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6		
SATA cables	One SATA cable (one 1-drop to disk) / one SATA connector		
EIDE CD	Some: 24X-10X <sup>4</sup> CD-ROM / Ultrabay Enhanced (12.5mm high)		
EIDE Combo	Some: 24X/24X/24X/8X Max <sup>11</sup> CD-RW/DVD-ROM Combo / Ultrabay Enhanced (12.5mm high)		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)		
EIDE cables	One cable (one 1-drop Ultrabay Enhanced cable to optical) / one EIDE connector (Ultrabay Enhanced) on systemboard		
Diskette drive	None / use optional external USB-based 3.5" 1.44MB diskette drive		
Chipset	Intel 915GV Express Chipset / 82915GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / National Semiconductor® PC8375T Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Ports	Front: two USB (Version 2.0), microphone in (mono), headphone out (mono) Back: four USB (Version 2.0), one serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Audio connectors	Back: line-in (mono), line-out (mono) [all 3.5mm]		
Audio	Integrated digital audio / SoundMAX® Cadenza / AC '97 / ADI1981B codec		
Speaker	One internal speaker for business audio		
Ethernet	10/100/1000 gigabit ethernet on planar / Broadcom® NetXtreme™ Gigabit Network Connection / BCM5705 controller / PHY and MAC layer / 32-bit PCI 2.3 / full duplex / Wake on LAN® / ACPI 1.1 / PXE 2.0 and RPL remote boot		
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter		
Security chip	Embedded Security Subsystem 2.0 <sup>18</sup> / in NS PC8375T chip / TCG-compliant		
Keyboard	[EP] Enhanced Performance USB Keyboard, 2-port USB 2.0 hub, black		
(one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black		
	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), optical, 400 dpi, black		
Cooling fans	Four variable speed fans (front, back, fansink, power supply)		
Power supply	200 watts with variable speed fan / universal / autosensing / two diagnostic LEDs		
		<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• ACPI 2.0b-compliant</li> <li>• SMBIOS 2.3.1-compliant</li> <li>• DMI 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip)</li> </ul> <p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard or mouse</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Some: cover intrusion switch</li> <li>• Some: fingerprint reader keyboard</li> </ul> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↩ 1-year parts and labor</li> <li>↩ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↩ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↩ Other ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↩ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>	

### Preload with Windows XP Home<sup>5</sup>

Microsoft® Windows® XP Home Edition

### Preload with Windows XP Professional<sup>5</sup>

Microsoft Windows XP Professional

### Preloaded (all)

- Access Program
- Rescue and Recovery™
- Update Connector™<sup>15</sup>
- Norton AntiVirus (OEM version)
- PC-Doctor™ (diagnostics)
- Client Security Software
- RecordNow and DLA (combo models)
- InterVideo WinDVD (combo models)

### Accessories

256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
CD-RW/DVD Combo Ultrabay Enhanced	73P3275
Super Multi-Burner Ultrabay Enhanced Drv	40Y8624
ThinkPad DVD-ROM Ultrabay Slim Drive	73P3270
160GB Serial ATA300 Disk (7200 rpm)	09N4254
USB Portable Diskette Drive	05K9276
USB 2.0 Super Multi-Burner Drive	41N5565
Lenovo L192 Wide 19" Monitor (black)	6920AB1
Enh Perf Wireless Keyboard and Mouse	73P4067
ThinkCentre Ultra Small Under Desk Mount	40Y8625
Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced on May 17, 2005, June 6, 2006, and July 25, 2006  
US models withdrawn effective December 2005, May 2006, or June 2007

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ThinkCentre® A51 Desktop (8129) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Bus MHz	EM64T	Memory <sup>a</sup>	SATA disk	EIDE optical	Chip Graphics	PCIe ethernet	Modem adptr	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date	
A51	8129-11U	3x4	Pentium® 4 516	2.93	1MB	533	EM64T	256MB	40GB <sup>2</sup>	CD	GMA 900	GV	10/100	No	XP Pro <sup>5</sup>	1-yr	No	Sep05
A51	8129-12U	3x4	Pentium 4 516	2.93	1MB	533	EM64T	512MB	40GB	CD-RW	GMA 900	GV	10/100	No	XP Pro	1-yr	No	Sep05
A51	8129-13U	3x4	Pentium 4 519K3.06	1MB	533	EM64T	256MB	40GB	CD	GMA 900	GV	10/100	No	XP Pro	1-yr	No	Sep05	
A51	8129-14U	3x4	Pentium 4 519K3.06	1MB	533	EM64T	512MB	40GB	CD-RW	GMA 900	GV	10/100	No	XP Pro	1-yr	No	Sep05	
A51	8129-21U	4x4	Pentium 4 521	2.8	1MB	800	EM64T	512MB	40GB	CD	GMA 900	G	Gigabit	No	XP Pro	1-yr	No	Sep05
A51	8129-D1U	4x4	Pentium 4 630	3.00	2MB	800	EM64T	512MB	40GB	CD	GMA 900	G	Gigabit	No	XP Pro	1-yr	No	Sep05
A51	8129-D2U	4x4	Pentium 4 630	3.00	2MB	800	EM64T	512MB	80GB	CD-RW	GMA 900	G	Gigabit	No	XP Pro	1-yr	No	Sep05
A51	8129-E1U	4x4	Pentium 4 640	3.20	2MB	800	EM64T	512MB	80GB	Combo	GMA 900	G	Gigabit	No	XP Pro	1-yr	No	Sep05

These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	<b>Quality, choice, and affordability</b> <b>Intel® Pentium 4 Processor 516</b> with 533MHz bus, <b>519K</b> with XD and 533MHz bus, or <b>521, 630, 640</b> with XD and 800MHz bus <b>521/6xx:</b> Hyper-Threading (HT) technology; <b>6xx:</b> EIST; <b>All:</b> EM64T <b>1MB or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	
Proc features	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector	
L2 cache Implementation	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard Some: 48X/20X <sup>4</sup> CD-ROM Some: 48X/32X/48X Max <sup>4</sup> CD-RW Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / 1 planar connector 3.5" 1.44MB diskette drive	
Memory - std/max	<b>256 or 512MB std</b> / 4GB max Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-3200 400MHz DDR2</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual-channel capable	
Memory	<b>Intel 915GV or 915G Express Chipset</b> / 82915GV or G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal control	
Graphics	Desktop  <p>Bay ① 3.5", SL 1", access, std diskette                      Bay ② 5.25", HH 1.6", access, std optical                      Bay ③ 5.25", HH 1.6" access, open                      Bay ④ 3.5", SL 1", no access, std disk</p>	
SATA disk	3x4 models with 915GV chipset: Slot 1: half-length, full-height, PCI Express x1 Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)	
SATA controller	4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
SATA cables	• Business black color • Supports up to 100 lb monitor on top of metal cover • 17.4" W X 15.7"D X 5.5"H • 442mm W X 400mm D X 140mm H • 24 to 31 lb (11 to 14 kg) • Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting) • Toolless install and removal of disk, optical, diskette • Toolless install and removal of cover • Toolless install and remove of adapter cards	
EIDE CD	• PC 2001-compliant • Advanced Configuration and Power Interface (ACPI) 2.0c • SMBIOS 2.3.1-compliant • DMI 2.0-compliant	
EIDE CD-RW	SECURITY	
EIDE Combo	• One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington Microsaver cable) - No keylock • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Disk, removable, and network device boot password • Diskette write protect • Front USB port disablement	
EIDE controller	LIMITED WARRANTY <sup>1</sup>	
EIDE cables	⇨ 1-year parts and labor ⇨ International Warranty Service <sup>9</sup> ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ ThinkPlus™ services at lenovo.com/thinkplus/warranty ⇨ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup> via 800-IBM-SERV (426-7378)	
Diskette drive	Keyboard Mouse 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Cooling fans Two variable speed fans (front and power supply) Power supply 310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	
Chipset	<b>Preload with Windows XP Professional<sup>5</sup></b>	
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]	
Audio	Integrated digital audio / SoundMAX <sup>®</sup> Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec	
Beeper	One internal beeper	
Ethernet	915GV models: 10/100 ethernet on systemboard / Broadcom <sup>®</sup> BCM5751F controller (MAC/PHY) / PCIe x1 / Wake on LAN <sup>®</sup> / PXE 2.0 and RPL remote boot 915G models: Gigabit ethernet on systemboard / Broadcom BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot	
Keyboard	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 160GB Serial ATA300 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 Super Multi-Burner Drive 40Y8638 USB 2.0 Portable 80GB Hard Disk 40Y8726 ThinkVision <sup>®</sup> C190 19" (18.0" vis) (black) 6739P0N ThinkVision L151 15" Monitor (black) 9205AB6 ThinkVision L151p 15" Monitor (black) 9205HB2 ThinkVision L192p 19" Monitor (black) 9419HB2 ThinkVision L201p 20.1" Monitor (black) 9320HB1 DVI-I PCIe Connection Adapter (ADD2)* 73P2516 ATI <sup>®</sup> RADEON <sup>®</sup> X300 SE 128MB Dual Head* 40Y8405 ATI RADEON X700 128MB Dual Head* 73P2518 *only supported on 915G chipset models Kensington <sup>®</sup> MicroSaver <sup>®</sup> Desktop Lock 06P3839 Belkin <sup>®</sup> 800VA UPS with AVR technology 31P7662 Enh Perf Wireless Keyboard and Mouse 73P4067 Other options at lenovo.com/options	

See footnotes for important warranty information  
US models announced September 6, 2005  
US models withdrawn effective December 2005 or May 2006

# ThinkCentre® A51 Desktop (8133) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	EM64T	Memory <sup>8</sup>	SATA disk	EIDE optical	Graphics Chipset	PCIe ethernet	Modem adptr	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date		
A51	8133-22U	4x4	Pentium® 4	520	2.8	1MB	800	512MB	40GB <sup>2</sup>	CD	GMA 900	915G	Gigabit	No	XP Pro <sup>5</sup>	3-yr	No	Apr 05	
A51	8133-31U	4x4	Pentium 4	530	3.0	1MB	800	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	Apr 05	
A51	8133-41U	4x4	Pentium 4	540	3.2	1MB	800	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	Apr 05	
A51	8133-24U	4x4	Pentium 4	521	2.8	1MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8133-34U	4x4	Pentium 4	531	3.0	1MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8133-44U	4x4	Pentium 4	541	3.2	1MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8133-D2U	4x4	Pentium 4	630	3.00	2MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8133-E1U	4x4	Pentium 4	640	3.20	2MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8133-F1U	4x4	Pentium 4	650	3.40	2MB	800	EM64T	512MB	40GB	CD	GMA 900	915G	Gigabit	No	XP Pro	3-yr	No	July 05

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

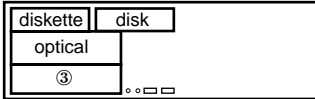
Positioning Processor	Quality, choice, and affordability			Desktop																																																																																							
Proc features	Intel® Pentium 4 Processor 520, 530, 540 with 800MHz bus or 521, 531, 541, 630, 640, 650 with XD, EM64T, and 800MHz bus																																																																																										
L2 cache Implementation	All: Hyper-Threading (HT) technology; 6xx: EIST 1MB or 2MB std and max / ECC / full speed			<ul style="list-style-type: none"> <li>Bay 1 3.5", SL 1", access, std diskette</li> <li>Bay 2 5.25", HH 1.6", access, std optical</li> <li>Bay 3 5.25", HH 1.6", access, open</li> <li>Bay 4 3.5", SL 1", no access, std disk</li> </ul>																																																																																							
Memory - std/max <sup>8</sup>	512MB std / 4GB max			<ul style="list-style-type: none"> <li>Slot 1: full-length, full-height, PCI Express x16</li> <li>Slot 2: half-length, full-height, PCI Express x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</li> </ul>																																																																																							
Memory	Four 240-pin gold plated DIMM sockets / two sockets used (256MB DIMM in each socket) / non-parity / dual-channel capable			<ul style="list-style-type: none"> <li>Business black color</li> <li>Supports up to 100 lb monitor on top of metal cover</li> <li>17.4" W X 15.7"D X 5.5"H</li> <li>442mm W X 400mm D X 140mm H</li> <li>24 to 31 lb (11 to 14 kg)</li> <li>Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting)</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of cover</li> <li>Toolless install and remove of adapter cards</li> </ul>																																																																																							
Graphics	Intel Graphics Media Accelerator 900 (GMA 900) / integrated graphics in 915G GMCH / uses main memory (up to 128MB with 256MB+)			<ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0c</li> <li>SMBIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>																																																																																							
SATA disk controller	40GB / SATA150 7200 rpm / vibration dampening mounts			SECURITY																																																																																							
SATA cables	Serial ATA / 150 MB/sec SATA150 / integrated in ICH6			<ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>																																																																																							
EIDE CD	One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard																																																																																										
EIDE controller	48X-20X <sup>4</sup> CD-ROM																																																																																										
EIDE cables	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)																																																																																										
Diskette drive	One 2-drop EIDE 80-conductor cable to optical / 1 planar connector																																																																																										
Chipset	3.5" 1.44MB diskette drive																																																																																										
Front ports	Intel 915G Express Chipset / 82915G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, keyboard, mouse, auto-thermal controls																																																																																										
Rear ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)																																																																																										
Rear audio ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																																																																																										
Audio	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]																																																																																										
Beeper	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec																																																																																										
Ethernet	One internal beeper																																																																																										
Keyboard	Gigabit ethernet on systemboard / Broadcom® BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot																																																																																										
Mouse	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																																																																																										
Cooling fans	Optical Wheel Mouse (USB only), 400 dpi, black																																																																																										
Power supply	Two variable speed fans (front and power supply)																																																																																										
<p><b>Preload with Windows XP Professional<sup>5</sup> Accessories</b></p> <table border="1"> <tbody> <tr> <td>Microsoft® Windows® XP Professional with Service Pack 2</td> <td>256MB PC2-4200 CL4 NP DDR2 UDIMM</td> <td>73P4970</td> </tr> <tr> <td>- Disk-to-Disk Recovery (in hidden protected area)</td> <td>512MB PC2-4200 CL4 NP DDR2 UDIMM</td> <td>73P4971</td> </tr> <tr> <td></td> <td>1GB PC2-4200 CL4 NP DDR2 UDIMM</td> <td>73P4972</td> </tr> <tr> <td></td> <td>2GB PC2-4200 CL4 NP DDR2 UDIMM</td> <td>73P4973</td> </tr> <tr> <td></td> <td>160GB Serial ATA300 Disk (7200 rpm)</td> <td>09N4254</td> </tr> <tr> <td></td> <td>Multi-Burner Plus<sup>6</sup> (DVD±RW; internal)</td> <td>73P3370</td> </tr> <tr> <td></td> <td>USB 2.0 Memory Key 1GB</td> <td>40Y7421</td> </tr> <tr> <td></td> <td>USB 2.0 Super Multi-Burner Drive</td> <td>40Y8638</td> </tr> <tr> <td></td> <td>USB 2.0 Portable 80GB Hard Disk</td> <td>40Y8726</td> </tr> <tr> <td></td> <td>ThinkVision® C170 17" (16.0" vis) (black)</td> <td>6737P6N</td> </tr> <tr> <td></td> <td>ThinkVision C190 19" (18.0" vis) (black)</td> <td>6739P0N</td> </tr> <tr> <td></td> <td>ThinkVision L151 15" Monitor (black)</td> <td>9205AB6</td> </tr> <tr> <td></td> <td>ThinkVision L151p 15" Monitor (black)</td> <td>9205HB2</td> </tr> <tr> <td></td> <td>ThinkVision L171p 17" Monitor (black)</td> <td>9417HB2</td> </tr> <tr> <td></td> <td>ThinkVision L192p 19" Monitor (black)</td> <td>9419HB2</td> </tr> <tr> <td></td> <td>ThinkVision L201p 20.1" Monitor (black)</td> <td>9320HB1</td> </tr> <tr> <td></td> <td>DVI-I PCIe Connection Adapter (ADD2)</td> <td>73P2516</td> </tr> <tr> <td></td> <td>ATI® RADEON® X300 SE 128MB Dual Head</td> <td>40Y8405</td> </tr> <tr> <td></td> <td>ATI RADEON X700 128MB Dual Head</td> <td>73P2518</td> </tr> <tr> <td></td> <td>Kensington® MicroSaver® Desktop Lock</td> <td>06P3839</td> </tr> <tr> <td></td> <td>Belkin® 800VA UPS with AVR technology</td> <td>31P7662</td> </tr> <tr> <td></td> <td>Optical 3-button ScrollPoint Mouse (black)</td> <td>31P7405</td> </tr> <tr> <td></td> <td>Enh Perf Wireless Keyboard and Mouse</td> <td>73P4067</td> </tr> <tr> <td></td> <td>Enhanced Performance USB Keyboard</td> <td>73P2620</td> </tr> <tr> <td></td> <td>Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></td> <td></td> </tr> </tbody> </table>																	Microsoft® Windows® XP Professional with Service Pack 2	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970	- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971		1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972		2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973		160GB Serial ATA300 Disk (7200 rpm)	09N4254		Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370		USB 2.0 Memory Key 1GB	40Y7421		USB 2.0 Super Multi-Burner Drive	40Y8638		USB 2.0 Portable 80GB Hard Disk	40Y8726		ThinkVision® C170 17" (16.0" vis) (black)	6737P6N		ThinkVision C190 19" (18.0" vis) (black)	6739P0N		ThinkVision L151 15" Monitor (black)	9205AB6		ThinkVision L151p 15" Monitor (black)	9205HB2		ThinkVision L171p 17" Monitor (black)	9417HB2		ThinkVision L192p 19" Monitor (black)	9419HB2		ThinkVision L201p 20.1" Monitor (black)	9320HB1		DVI-I PCIe Connection Adapter (ADD2)	73P2516		ATI® RADEON® X300 SE 128MB Dual Head	40Y8405		ATI RADEON X700 128MB Dual Head	73P2518		Kensington® MicroSaver® Desktop Lock	06P3839		Belkin® 800VA UPS with AVR technology	31P7662		Optical 3-button ScrollPoint Mouse (black)	31P7405		Enh Perf Wireless Keyboard and Mouse	73P4067		Enhanced Performance USB Keyboard	73P2620		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
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<p><b>Preloadable</b></p> <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Access Program</li> <li>Update Connector™<sup>15</sup></li> <li>Adobe Reader</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> </ul> <p><b>Downloadable</b></p> <ul style="list-style-type: none"> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul> <p><b>License</b> - CD not included</p> <ul style="list-style-type: none"> <li>Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</li> </ul>																																																																																											
<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9197)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>																																																																																											

See footnotes for important warranty information  
US models announced April 19 or July 19, 2005  
US models withdrawn effective August 2005, December 2005, or May 2006

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# ThinkCentre® A51 Desktop (8135) - withdrawn

Name	Type	Slot x	Processor	L2 GHz	Bus cache	EM64T	Memory	SATA disk	EIDE optical	Graphics Chipset	PCle ethernet	Modem	Preload	Limited warranty <sup>1</sup>	Workhorse <sup>2</sup>	Avail
A51	8135-A1U	3x4	Celeron® D 335J	2.80	256K	533	256MB	40GB <sup>2</sup>	CD	GMA 900 915GV	10/100	No	XP Pro <sup>5</sup>	3/1-yr	LOR	No Apr 05
A51	8135-B1U	3x4	Celeron D 345J	3.06	256K	533	256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3/1-yr	LOR	No Apr 05
A51	8135-32U	4x4	Pentium® 4 530	3.0	1MB	800	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3/1-yr	LOR	No Apr 05
A51	8135-42U	4x4	Pentium 4 540	3.2	1MB	800	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3/1-yr	LOR	No Apr 05
A51	8135-A2U	3x4	Celeron D 336	2.80	256K	533	EM64T 256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3/1-yr	LOR	No July 05
A51	8135-B2U	3x4	Celeron D 346	3.06	256K	533	EM64T 256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3/1-yr	LOR	No July 05
A51	8135-35U	4x4	Pentium 4 531	3.0	1MB	800	EM64T 256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3/1-yr	LOR	No July 05
A51	8135-45U	4x4	Pentium 4 541	3.2	1MB	800	EM64T 256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3/1-yr	LOR	No July 05

<p>Positioning Processor <i>Quality, choice, and affordability</i></p> <p>Processor <b>Intel® Celeron D Processor 335J, 336, 345J, 346</b> with Execute Disable Bit and 533MHz system bus or <b>Intel® Pentium 4 530, 531, 540, 541</b> with 800MHz system bus <i>Celeron 336/346 and Pentium 531/541: XD and EM64T</i></p>		<p><b>Desktop</b></p>  <p>Bay ① 3.5", SL 1", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 5.25", HH 1.6" access, open Bay ④ 3.5", SL 1", no access, std disk</p> <p>3x4 models with 915GV chipset: Slot 1: half-length, full-height, PCI Express x1 Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <ul style="list-style-type: none"> <li>Business black color</li> <li>Supports up to 100 lb monitor on top of metal cover</li> <li>17.4" W X 15.7"D X 5.5"H</li> <li>442mm W X 400mm D X 140mm H</li> <li>24 to 31 lb (11 to 14 kg)</li> <li>Bay 1, 2, 3, and 4 in cage flips up (latched and pivoting)</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of cover</li> <li>Toolless install and remove of adapter cards</li> </ul>
<p>Hyper-Threading L2 cache Implementation Processor and L2 cache in FC-LGA4 in LGA775 socket</p>		
<p>Memory - std/max<sup>8</sup> <b>256MB std</b> / 4GB max</p> <p>Memory Four 240-pin gold plated DIMM sockets / one socket used / non-parity / unbuffered / dual-channel capable <i>April models: PC2-3200 400MHz DDR2 / CAS latency 3 (CL3)</i> <i>July models: PC2-4200 533MHz DDR2 / CAS latency 4 (CL4)</i></p>		
<p>Graphics <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915GV or G GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</p>		
<p>SATA disk <b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts</p> <p>SATA controller Serial ATA / 150 MB/sec SATA150 / integrated in ICH6</p> <p>SATA cables One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard</p> <p>EIDE CD 48X-20X<sup>4</sup> CD-ROM</p> <p>EIDE controller Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)</p> <p>EIDE cables One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar</p> <p>Diskette drive 3.5" 1.44MB diskette drive</p>		
<p>Chipset <b>Intel 915GV or 915G Express Chipset</b> / 82915GV or G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal control</p>		
<p>Front ports Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Rear ports Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p>Rear audio ports Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]</p> <p>Audio Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec</p> <p>Beeper One internal beeper</p> <p>Ethernet <b>915G models:</b> 10/100 ethernet on systemboard / Broadcom® BCM5751F controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot <b>915G models:</b> Gigabit ethernet on systemboard / Broadcom BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot</p>		
<p>Modem None</p>		
<p>Keyboard 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p> <p>Mouse Optical Wheel Mouse (USB only), 400 dpi, black</p> <p>Cooling fans Two variable speed fans (front and power supply)</p>		

- PC 2001-compliant
- Advanced Configuration and Power Interface (ACPI) 2.0c
- SMBIOS 2.3.1-compliant
- DMI 2.0-compliant

### SECURITY

- One lock to secure both cover and entire system to fixed object:
  - Padlock loop (in rear for opt padlock)
  - Security slot (in rear for optional Kensington Microsaver cable)
  - No keylock
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
- Disk, removable, and network device boot password
- Diskette write protect
- Front USB port disablement

### LIMITED WARRANTY<sup>1</sup>

- 3-year parts / 1 year labor
- International Warranty Service<sup>9</sup>
- 1st year: Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am-5 pm, Mon - Fri coverage excluding holidays, 2nd business day response time)
- 2nd/3rd year: parts exchange only, call 1-800-IBM-SERV (426-7378)
- Onsite service upgrade options (in eligible locations)<sup>7</sup>:
  - 3-year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9181)
- Other ThinkPlus services at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)
- 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)

Preload with Windows XP Professional <sup>5</sup>	Accessories	
Microsoft® Windows® XP Professional with Service Pack 2	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
<b>Preloaded</b>	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
• Rescue and Recovery™	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
• Access Program	160GB Serial ATA300 Disk (7200 rpm)	09N4254
• Update Connector™ <sup>15</sup>	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370
• Adobe Reader	USB 2.0 Memory Key 1GB	40Y7421
• Norton AntiVirus (OEM version)	USB 2.0 Portable 80GB Hard Disk	40Y8726
• PC-Doctor™ (diagnostics)	USB 2.0 Super Multi-Burner Drive	40Y8638
<b>Downloadable</b>	ThinkVision® C170 17" (16.0" vis) (black)	6737P6N
• Software Delivery Assistant	ThinkVision C190 19" (18.0" vis) (black)	6739P0N
• System Migration Assistant	ThinkVision L171p 17" Monitor (black)	9417HB2
• IBM Director Agent	ThinkVision L192p 19" Monitor (black)	9419HB2
<b>License</b> - CD not included	ThinkVision L201p 20.1" Monitor (black)	9320HB1
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	DVI-I PCIe Connection Graphic Adapter*	73P2516
	ATI® RADEON® X300 SE 128MB Dual Head*	40Y8405
	ATI RADEON X700 128MB Dual Head*	73P2518
	NVIDIA® GeForce 6200 4MB Dual Head*	73P2517
	<sup>8</sup> only supported on 915G chipset models	
	Kensington® MicroSaver® Desktop Lock	06P3839
	Enh Perf Wireless Keyboard and Mouse	73P4067
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

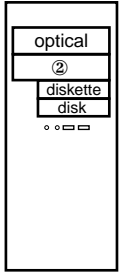
See footnotes for important warranty information  
US models announced April 19 or July 19, 2005  
US models withdrawn effective August 2005, December 2005, or May 2006

# ThinkCentre® A51 Tower (8131) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x	Type-model bay	Processor	GHz	L2 cache	Bus MHz	Memory <sup>8</sup> in MB	Diskette drive	SATA disk	EIDE optical	Graphics GMA 900	Chipset Ethernet	Modem & spkrs	Preload Mouse	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date	
A51	8131-A1U	3x4	Celeron® 325J	2.53	256K	533	256	Dskte	40GB <sup>2</sup>	CD-RW	900	GV	10/100	Yes	Opcl XP Home <sup>5</sup>	1 yr	No	May 05
A51	8131-A2U	3x4	Celeron 325J	2.53	256K	533	256	40GB	CD		900	GV	10/100	No	2 btn XP Home	1 yr	No	May 05
A51	8131-A3U	3x4	Celeron 325J	2.53	256K	533	256	Dskte	40GB	CD	900	GV	10/100	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-A4U	3x4	Celeron 330J	2.66	256K	533	256	40GB	CD		900	GV	10/100	No	2 btn XP Home	1 yr	No	May 05
A51	8131-A5U	3x4	Celeron 330J	2.66	256K	533	256	Dskte	40GB	CD	900	GV	10/100	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-ABU	3x4	Celeron 330J	2.66	256K	533	256	40GB	CD		900	GV	10/100	No	2 btn DOS licens	1 yr	No	May 05
A51	8131-A9U	3x4	Celeron 335J	2.80	256K	533	256	Dskte	40GB	CD	900	GV	10/100	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-11U	4x4	Pentium® 4	2.66	1MB	533	256	Dskte	40GB	CD	900	G	Gigabit	No	2 btn XP Home	1 yr	No	May 05
A51	8131-12U	4x4	Pentium 4	2.66	1MB	533	256	Dskte	40GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-13U	4x4	Pentium 4	2.66	1MB	533	256	Dskte	80GB	CD-RW	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-16U	4x4	Pentium 4 515	2.93	1MB	533	256	Dskte	40GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-17U	4x4	Pentium 4 515	2.93	1MB	533	512	Dskte	40GB	CD-RW	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-19U	3x4	Pentium 4 515	2.93	1MB	533	256	40GB	CD		900	GV	10/100	No	2 btn DOS licens	1 yr	No	May 05
A51	8131-33U	4x4	Pentium 4 530	3.0	1MB	800	256	Dskte	40GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-34U	4x4	Pentium 4 530	3.0	1MB	800	512	Dskte	40GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-35U	4x4	Pentium 4 530	3.0	1MB	800	512	Dskte	80GB	CD-RW	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-37U	4x4	Pentium 4 530	3.0	1MB	800	512	Dskte	80GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-38U	4x4	Pentium 4 530	3.0	1MB	800	512	Dskte	80GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-41U	4x4	Pentium 4 540	3.2	1MB	800	512	Dskte	40GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-42U	4x4	Pentium 4 540	3.2	1MB	800	512	Dskte	80GB	CD-RW	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05
A51	8131-45U	4x4	Pentium 4 540	3.2	1MB	800	256	40GB	CD		900	G	Gigabit	No	2 btn DOS licens	1 yr	No	May 05
A51	8131-47U	4x4	Pentium 4 540	3.2	1MB	800	512	Dskte	80GB	CD	900	G	Gigabit	No	Opcl XP Pro	1 yr	No	May 05

These small and medium business (SMB) models are part of the US ThinkCentre Express Program

Positioning Processor	<i>Quality, choice, and affordability</i> <b>Intel® Celeron D Processor 325J (2.53GHz), 330J (2.66GHz), 335J (2.80GHz)</b> with Execute Disable Bit and 533MHz bus or <b>Intel Pentium 4 at 2.66, 515 (2.93GHz), 530 (3.0GHz), 540 (3.2GHz)</b> with 533 or 800MHz system bus	<b>Tower</b> <ul style="list-style-type: none"><li>Business black color</li><li>7.0" W X 17.7" D X 17.0" H</li><li>178mm W X 450mm D X 432mm H</li><li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li><li>Handle on top front</li><li>Thumbscrew to remove bay 3 and 4</li><li>Toolless install and removal of disk, optical, diskette</li><li>Toolless install and removal of side cover</li><li>Toolless install and removal of adapter cards</li></ul> 
Hyper-Threading L2 cache Implementation	<i>Some: Hyper-Threading (HT) technology</i> <b>256KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	
Memory - std/max <sup>2</sup> Memory	<b>256</b> or <b>512MB</b> std / 4GB max Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-3200 400MHz DDR2</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual channel capable	
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G or GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector	Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk
SATA disk	<b>40</b> or <b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts	3x4 models with 915GV chipset: Slot 1: full-length, full-height, PCI Express x1 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)
SATA controller	Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6	4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)-modem* Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) *some models
SATA cables	One SATA cable (one 1-drop to disk) / four SATA connectors	
EIDE CD	<i>Some: 48X-20X<sup>4</sup> CD-ROM</i>	
EIDE CD-RW	<i>Some: 48X/32X/48X Max<sup>4</sup> CD-RW</i>	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)	
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one connector	
Diskette drive	<i>Some: 3.5" 1.44MB diskette drive</i>	
Chipset	<b>Intel 915G</b> or <b>915GV Express Chipset</b> / 82915G or GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls	
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	<b>SECURITY</b> <ul style="list-style-type: none"><li>One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none"><li>Padlock loop (in rear for opt padlock)</li><li>Security slot (in rear for optional Kensington® Microsaver® cable)</li><li>No keylock</li></ul></li><li>Power-on and administrator password</li><li>Boot sequence control</li><li>Boot without keyboard, mouse, diskette</li><li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li><li>Disk, removable, and network device boot password</li><li>Diskette write protect</li><li>Front USB port disablement</li></ul>
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"><li>1 year parts and labor</li><li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li><li>ThinkPlus™ services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li><li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li></ul>
Audio	Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec	
Speakers	<i>Some: External active speakers / Jazz Infinity® / 2-piece / 3 watts / black color</i>	
Beeper	One internal beeper	
Ethernet	<i>915GV models:</i> 10/100 ethernet on systemboard / <b>Broadcom® BCM5751F</b> controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot <i>915G models:</i> Gigabit ethernet on systemboard / <b>Broadcom BCM5751</b> controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot	
Modem	<i>Some: 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter</i>	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	<i>Some: [2 btn] Std 2-Button PS/2 Mouse (6-pin PS/2 connector), black</i> <i>Some: [Opcl] Optical Wheel Mouse (USB only), 400 dpi, black</i>	
Cooling fans	Two variable speed fans (front and power supply)	
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	
<b>Accessories</b>	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 80GB Serial ATA150 Disk (7200 rpm) 09N4253 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Kensington® MicroSaver® Desktop Lock 06P3839	USB 2.0 Portable Multi-Burner Drive 22P9163 USB 2.0 Memory Key 1GB 40Y7421 ThinkVision® L151 15" Monitor 9205AB2 ThinkVision L151p 15" Monitor 9205HB2 ThinkVision L171 17" Monitor 9417AB1 ThinkVision L171p 17" Monitor 9417HB7 ThinkVision C170 17" (16.0" vis) 6737P6N Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>

See footnotes for important warranty information  
US models announced April 19, 2005  
US models withdrawn effective August or December 2005



# ThinkCentre® A51 Tower (8138) - Express - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>9</sup>	SATA disk	EIDE optical	Graphics Chipset	PCle ethernet adptr	Modem	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A51	8138-A1U 3x4	Celeron® 325J	2.53	256K	533		256MB	40GB <sup>2</sup>	CD	GMA 900 915GV	10/100	No	XP Pro <sup>5</sup>	3 yr	No	May 05
A51	8138-A2U 3x4	Celeron 330J	2.66	256K	533		256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3 yr	No	May 05
A51	8138-A3U 3x4	Celeron 335J	2.80	256K	533		256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3 yr	No	May 05
A51	8138-12U 4x4	Pentium® 4	2.66	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-13U 4x4	Pentium 4	2.66	1MB	533		256MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-14U 4x4	Pentium 4 515	2.93	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-15U 4x4	Pentium 4 515	2.93	1MB	533		512MB	40GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-31U 4x4	Pentium 4 530	3.0	1MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-32U 4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-33U 4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-36U 4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-41U 4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-42U 4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8138-44U 4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05

*These small and medium business (SMB) models are part of the US ThinkCentre Express Program*

Positioning Processor	<i>Quality, choice, and affordability</i> <b>Intel® Celeron D Processor 325J (2.53GHz), 330J (2.66GHz), 335J (2.80GHz)</b> with Execute Disable Bit and 533MHz bus or <b>Intel Pentium 4 at 2.66, 515 (2.93GHz), 530 (3.0GHz), 540 (3.2GHz)</b> with 533 or 800MHz system bus	<b>Power</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7"D X 17.0"H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>	
Hyper-Threading L2 cache Implementation	<i>Some:</i> Hyper-Threading (HT) technology <b>256KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>8</sup> Memory	<b>256</b> or <b>512MB</b> std / 4GB max Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-3200 400MHz DDR2</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual channel capable		
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G or GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector		
SATA disk SATA controller SATA cables EIDE CD EIDE CD-RW EIDE controller EIDE cables Diskette drive	<b>40</b> or <b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM <i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar 3.5" 1.44MB diskette drive	<b>Bay ①</b> 5.25", HH 1.6", access, std optical <b>Bay ②</b> 5.25", HH 1.6" access, open <b>Bay ③</b> 3.5", SL 1", access, std diskette <b>Bay ④</b> 3.5", SL 1", no access, std disk  3x4 models with 915GV chipset: Slot 1: full-length, full-height, PCI Express x1 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)  4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)	
Chipset	<b>Intel 915G</b> or <b>915GV Express Chipset</b> / 82915G or GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls	<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>	
Front ports Rear ports Rear audio ports Audio Beeper Ethernet Modem	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec One internal beeper <i>915GV models:</i> 10/100 ethernet on systemboard / Broadcom® BCM5751F controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot <i>915G models:</i> Gigabit ethernet on systemboard / Broadcom BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot None	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3 year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3 year LOR 9x5, Next Business Day (ThinkPlus™ part number 41C9197)</li> <li>3 year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>	
Keyboard Mouse Cooling fans Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (front and power supply) 310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> • Rescue and Recovery™ • Access Program • Update Connector™.15 • Adobe Reader • Norton AntiVirus (OEM version) • PC-Doctor™ (diagnostics) <b>Downloadable</b> • Software Delivery Assistant • System Migration Assistant • IBM Director Agent	<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus® (DVD±RW; internal) 73P3370 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 Portable Multi-Burner Drive 22P9163 ThinkVision® L151 15" Monitor (black) 9205AB2 ThinkVision L171p 17" Monitor (black) 9417HB7 ThinkVision L191p 19" Monitor (black) 9419HB7 ThinkVision L200p 20.1" Monitor (black) 6736HC9 ThinkVision C170 17" (16.0" vis) (black) 6737P6N ATI® RADEON® X700 128MB Dual Head 73P2518 Preferred Pro USB Keyboard 73P5220 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>		

See footnotes for important warranty information  
US models announced April 19, 2005  
US models withdrawn effective August or December 2005

Name	Type-model	Slot x bay	Processor	GHz	L2-cache	Bus MHz	Hyper-Thread	Memory <sup>o</sup>	SATA disk	EIDE optical	Graphics Chipset	PCIe ethernet	Modem adptr	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A51	8138-A8U	3x4	Celeron® D 326	2.53	256K	533		256MB	40GB <sup>2</sup>	CD	GMA 900 915GV	10/100	No	XP Pro <sup>5</sup>	3-yr	No	July 05
A51	8138-ADU	3x4	Celeron D 331	2.66	256K	533		256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3-yr	No	July 05
A51	8138-B2U	3x4	Celeron D 336	2.80	256K	533		256MB	40GB	CD	GMA 900 915GV	10/100	No	XP Pro	3-yr	No	July 05
A51	8138-19U	4x4	Pentium® 4 506	2.66	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-1AU	4x4	Pentium 4 506	2.66	1MB	533		256MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-1FU	4x4	Pentium 4 516	2.93	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-1GU	4x4	Pentium 4 516	2.93	1MB	533		512MB	40GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-37U	4x4	Pentium 4 531	3.0	1MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-38U	4x4	Pentium 4 531	3.0	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-39U	4x4	Pentium 4 531	3.0	1MB	800	HT	512MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-3CU	4x4	Pentium 4 531	3.0	1MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-3DU	4x4	Pentium 4 531	3.0	1MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-45U	4x4	Pentium 4 541	3.2	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-46U	4x4	Pentium 4 541	3.2	1MB	800	HT	512MB	80GB	CD-RW	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-48U	4x4	Pentium 4 541	3.2	1MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-D3U	4x4	Pentium 4 630	3.00	2MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-D4U	4x4	Pentium 4 630	3.00	2MB	800	HT	512MB	80GB	Combo	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-E2U	4x4	Pentium 4 640	3.20	2MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-E3U	4x4	Pentium 4 640	3.20	2MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-E4U	4x4	Pentium 4 640	3.20	2MB	800	HT	512MB	80GB	Combo	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-F2U	4x4	Pentium 4 650	3.40	2MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-F3U	4x4	Pentium 4 650	3.40	2MB	800	HT	512MB	80GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05
A51	8138-F4U	4x4	Pentium 4 650	3.40	2MB	800	HT	512MB	80GB	Combo	GMA 900 915G	Gigabit	No	XP Pro	3-yr	No	July 05

These small and medium business (SMB) models are part of the US TopSeller™ Program

<p>Positioning Processor: <b>Quality, choice, and affordability</b> Intel® Celeron D Processor 326, 331, 336 with EM64T, Execute Disable Bit, and 533MHz bus or Intel Pentium 4 at 506, 516, 531, 541, 630, 640, 650 with EM64T, Execute Disable Bit (except 516), and 533 or 800MHz bus</p> <p>Proc features L2 cache Implementation: <b>Some: Hyper-Threading (HT) technology; 6xx: EIST</b> <b>256KB, 1MB, or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket</p> <p>Memory - std/max<sup>2</sup> Memory: <b>256 or 512MB std / 4GB max</b> Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</p> <p>Graphics: <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915GV or G / 333MHz / one 15-pin analog connector</p> <p>SATA disk SATA controller SATA cables EIDE optical: <b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar One of following: 48X-20X<sup>4</sup> CD-ROM, 48X/32X/48X Max<sup>4</sup> CD-RW, 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p> <p>EIDE controller EIDE cables Diskette drive: Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / 1 planar connector 3.5" 1.44MB diskette drive</p> <p>Chipset: <b>Intel 915GV or 915G Express Chipset</b> / 82915GV or G Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7"D X 17.0"H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul> <p>Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk</p> <p>3x4 models with 915GV chipset: Slot 1: full-length, full-height, PCI Express x1 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</p>	<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>
<p>Front ports Rear ports: Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p>Rear audio ports Audio Beeper Ethernet: Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / AC '97 interface / ADI1888 codec One internal beeper 915GV models: 10/100 ethernet on systemboard / Broadcom® BCM5751F 915G models: Gigabit ethernet on systemboard / Broadcom BCM5751</p> <p>Keyboard Mouse Cooling fans Power supply: 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black Two variable speed fans (front and power supply) 310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs</p>	<p><b>Preload with Windows XP Professional<sup>5</sup></b></p> <p>Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)</p> <p><b>Preloaded</b></p> <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Access Program</li> <li>Update Connector™<sup>15</sup></li> <li>Adobe Reader</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> </ul> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970</li> <li>512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971</li> <li>1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972</li> <li>2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973</li> <li>160GB Serial ATA300 Disk (7200 rpm) 09N4254</li> <li>Multi-Burner Plus® (DVD±RW; internal) 73P3370</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>ThinkVision® L192p 19" Monitor (black) 9419HB2</li> <li>ThinkVision L201p 20.1" Monitor (black) 9320HB1</li> <li>ATI® RADEON X300 SE 128MB Dual Head*40Y8405</li> <li>ATI RADEON X700 128MB Dual Head* 73P2518</li> </ul> <p>*only supported on 915G chipset models Other options at lenovo.com/options</p>	<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service®</li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>ThinkPlus™ services at lenovo.com/thinkplus/warranty</li> </ul>

See footnotes for important warranty information  
US models announced July 19, 2005  
US models withdrawn effective December 2005 or May 2006



# ThinkCentre® A51 Tower (8122) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x Type-model bay	Processor	L2 cache GHz	Bus MHz	Hyper- Thread	SATA Memory <sup>g</sup> disk	EIDE optical	Chipset Graphics	PCIe ethernet & spkrs	Modem	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A51	8122-A1U 3x4	Celeron® 325J	2.53	256K	533	256MB 40GB <sup>2</sup>	CD	GMA 900 915GV	10/100	Yes	XP Home <sup>5</sup>	1 yr	No	May 05
A51	8122-A2U 3x4	Celeron 330J	2.66	256K	533	256MB 40GB	CD	GMA 900 915GV	10/100	Yes	XP Home	1 yr	No	May 05
A51	8122-A3U 3x4	Celeron 330J	2.66	256K	533	512MB 80GB	CD-RW	GMA 900 915GV	10/100	Yes	XP Home	1 yr	No	May 05
A51	8122-A8U 3x4	Celeron 335J	2.80	256K	533	256MB 40GB	CD	GMA 900 915GV	10/100	Yes	XP Home	1 yr	No	May 05
A51	8122-A9U 3x4	Celeron 335J	2.80	256K	533	512MB 80GB	CD-RW	GMA 900 915GV	10/100	Yes	XP Home	1 yr	No	May 05
A51	8122-11U 4x4	Pentium® 4	2.66	1MB	533	256MB 40GB	CD	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-12U 4x4	Pentium 4	2.66	1MB	533	512MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-13U 4x4	Pentium 4 515	2.93	1MB	533	256MB 40GB	CD	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-14U 4x4	Pentium 4 515	2.93	1MB	533	256MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-15U 4x4	Pentium 4 515	2.93	1MB	533	512MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-16U 4x4	Pentium 4 515	2.93	1MB	533	512MB 80GB	Combo	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-31U 4x4	Pentium 4 530 3.0	3.0	1MB	800	256MB 40GB	CD	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-32U 4x4	Pentium 4 530 3.0	3.0	1MB	800	256MB 40GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-33U 4x4	Pentium 4 530 3.0	3.0	1MB	800	512MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-34U 4x4	Pentium 4 530 3.0	3.0	1MB	800	512MB 80GB	Combo	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-35U 4x4	Pentium 4 530 3.0	3.0	1MB	800	512MB 80GB	DVD±RW <sup>6</sup>	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-41U 4x4	Pentium 4 540 3.2	3.2	1MB	800	512MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-42U 4x4	Pentium 4 540 3.2	3.2	1MB	800	512MB 80GB	Combo	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-43U 4x4	Pentium 4 540 3.2	3.2	1MB	800	512MB 80GB	DVD±RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-51U 4x4	Pentium 4 550 3.4	3.4	1MB	800	512MB 80GB	CD-RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05
A51	8122-52U 4x4	Pentium 4 550 3.4	3.4	1MB	800	512MB 80GB	DVD±RW	GMA 900 915G	Gigabit	Yes	XP Home	1 yr	No	May 05

Positioning Processor	Quality, choice, and affordability <b>Intel® Celeron D Processor 325J (2.53GHz), 330J (2.66GHz), 335J (2.80GHz)</b> with Execute Disable Bit and 533MHz bus or <b>Intel Pentium 4 at 2.66, 515 (2.93GHz), 530 (3.0GHz), 540 (3.2GHz), 550 (3.4GHz)</b> with 533 or 800MHz system bus							<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>				
Hyper-Threading L2 cache Implementation	Some: Hyper-Threading (HT) technology <b>256KB</b> or <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket							<ul style="list-style-type: none"> <li>Bay ① 5.25", HH 1.6", access, std optical</li> <li>Bay ② 5.25", HH 1.6" access, open</li> <li>Bay ③ 3.5", SL 1", access, std diskette</li> <li>Bay ④ 3.5", SL 1", no access, std disk</li> </ul>				
Memory - std/max <sup>9</sup> Memory	<b>256</b> or <b>512MB</b> std / 4GB max Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-3200 400MHz DDR2</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual channel capable							<b>3x4 models with 915GV chipset:</b> Slot 1: full-length, full-height, PCI Express x1 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)  <b>4x4 models with 915G chipset:</b> Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)-modem* Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) *some models				
Graphics	<b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G or GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector											
SATA disk SATA controller SATA cables	<b>40</b> or <b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6 One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM <i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370) Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6) One 2-drop EIDE 80-conductor cable to optical / one connector Diskette drive 3.5" 1.4MB diskette drive											
EIDE CD EIDE CD-RW EIDE Combo EIDE DVD±RW EIDE controller EIDE cables Diskette drive												
Chipset	<b>Intel 915G or 915GV Express Chipset</b> / 82915G or GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls							<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>				
Front ports Rear ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)											
Rear audio ports Audio	Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm] Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec External active speakers / Jazz Infinity® / 2-piece / 3 watts / black color One internal beeper											
Speakers Beep Ethernet	<b>915GV models:</b> 10/100 ethernet on systemboard / Broadcom® BCM5751F controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot <b>915G models:</b> Gigabit ethernet on systemboard / Broadcom BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter											
Modem	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black							<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li><b>1 year parts and labor</b></li> <li><b>International Warranty Service<sup>9</sup></b></li> <li><b>Customer Replaceable Unit (CRU)</b> parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li><b>ThinkPlus™ services</b> at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li><b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>				
Keyboard	Optical Wheel Mouse (USB only), 400 dpi, black											
Mouse	Two variable speed fans (front and power supply)											
Cooling fans	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs											
Power supply	<b>Preload with Windows XP Home<sup>5</sup></b> Microsoft® Windows® XP Home Edition with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)  <b>Preloaded (only some listed)</b> • Rescue and Recovery™							<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 160GB Serial ATA150 Disk (7200 rpm) 09N4254 Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>				

See footnotes for important warranty information  
US models announced April 19, 2005  
US models withdrawn effective August or December 2005



# ThinkCentre® A51 Tower (8124) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Memory <sup>9</sup>	SATA disk	EIDE optical	Graphics Chipset	PCIe ethernet	Modem adptr	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A51	8124-A1U	3x4	Celeron® 335J	2.80	256K	533		256MB	40GB <sup>2</sup>	CD	GMA 900 915GV	10/100	Yes	XP Pro <sup>5</sup>	3 yr	No	May 05
A51	8124-11U	4x4	Pentium® 4	2.66	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-16U	4x4	Pentium 4 515	2.93	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-17U	4x4	Pentium 4 515	2.93	1MB	533		256MB	40GB	CD	GMA 900 915G	Gigabit	Yes	XP Pro	3 yr	No	May 05
A51	8124-18U	4x4	Pentium 4 515	2.93	1MB	533		512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-34U	4x4	Pentium 4 530	3.0	1MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-35U	4x4	Pentium 4 530	3.0	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-44U	4x4	Pentium 4 540	3.2	1MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-45U	4x4	Pentium 4 540	3.2	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-54U	4x4	Pentium 4 550	3.4	1MB	800	HT	256MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05
A51	8124-55U	4x4	Pentium 4 550	3.4	1MB	800	HT	512MB	40GB	CD	GMA 900 915G	Gigabit	No	XP Pro	3 yr	No	May 05

<p>Positioning Processor <b>Quality, choice, and affordability</b> <b>Intel® Celeron D Processor 335J (2.80GHz)</b> with Execute Disable Bit and 533MHz system bus or <b>Intel Pentium 4 at 2.66, 515 (2.93GHz), 530 (3.0GHz), 540 (3.2GHz), 550 (3.4GHz)</b> with 533 or 800MHz system bus</p> <p>Hyper-Threading L2 cache <i>Some:</i> Hyper-Threading (HT) technology <b>256KB or 1MB</b> std and max / ECC / full speed</p> <p>Implementation Processor and L2 cache in FC-LGA4 in LGA775 socket</p> <p>Memory - std/max<sup>6</sup> <b>256 or 512MB std / 4GB max</b></p> <p>Memory Four 240-pin gold plated DIMM sockets / one or two sockets used (256MB DIMM in each socket) / <b>PC2-3200 400MHz DDR2</b> / non-parity / CAS latency 3 (CL3) / unbuffered / dual channel capable</p> <p>Graphics <b>Intel Graphics Media Accelerator 900 (GMA 900)</b> / integrated graphics in 915G or GV GMCH / uses main memory (up to 128MB with 256MB+) / 333MHz / one 15-pin analog D-sub connector</p> <p>SATA disk <b>40GB</b> / SATA150 7200 rpm / vibration dampening mounts</p> <p>SATA controller Serial ATA 1.0 / 150 MB/sec SATA150 / integrated in ICH6</p> <p>SATA cables One SATA cable (one 1-drop to disk) / four SATA connectors on systemboard</p> <p>EIDE CD 48X-20X<sup>4</sup> CD-ROM / EIDE</p> <p>EIDE controller Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH6)</p> <p>EIDE cables One 2-drop EIDE 80-conductor cable to optical / one EIDE connector on planar</p> <p>Diskette drive 3.5" 1.44MB diskette drive</p> <p>Chipset <b>Intel 915G or 915GV Express Chipset</b> / 82915G or GV Graphics Memory Controller Hub (GMCH) / 82801FB I/O Controller Hub (ICH6) for SATA150, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O for serial, parallel, diskette, keyboard, mouse, auto-thermal controls</p> <p>Front ports Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Rear ports Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p>Rear audio ports Microphone-in (mono), line-in (stereo), line-out (stereo) [all 3.5mm]</p> <p>Audio Integrated digital audio / SoundMAX® Cadenza / software-based audio (done by processor and ICH6) / AC '97 interface / ADI1888 codec</p> <p>Beeper One internal beeper</p> <p>Ethernet <b>915G models:</b> 10/100 ethernet on systemboard / Broadcom® BCM5751F controller (MAC/PHY) / PCIe x1 / Wake on LAN® / PXE 2.0 and RPL remote boot <b>915G models:</b> Gigabit ethernet on systemboard / Broadcom BCM5751 controller (MAC/PHY) / PCIe x1 / Wake on LAN / PXE 2.0 and RPL remote boot</p> <p>Modem <i>Some:</i> 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter</p> <p>Keyboard 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p> <p>Mouse Optical Wheel Mouse (USB only), 400 dpi, black</p> <p>Cooling fans Two variable speed fans (front and power supply)</p> <p>Power supply 310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul> <p>Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk</p> <p>3x4 models with 915GV chipset: Slot 1: full-length, full-height, PCI Express x1 Slot 2: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>4x4 models with 915G chipset: Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)-modem* Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) *some models</p>	<table border="1" style="width: 100%;"> <tr><td style="text-align: center;">optical</td></tr> <tr><td style="text-align: center;">②</td></tr> <tr><td style="text-align: center;">diskette</td></tr> <tr><td style="text-align: center;">disk</td></tr> </table> <p style="font-size: small; text-align: center;">• • • • •</p>	optical	②	diskette	disk																															
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diskette																																					
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	<p><b>SYSTEMS MANAGEMENT</b></p> <ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>Advanced Configuration and Power Interface (ACPI) 2.0b</li> <li>SM BIOS 2.3.1-compliant</li> <li>DMI 2.0-compliant</li> </ul>																																				
	<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>																																				
		<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li><b>3 year parts and labor</b></li> <li><b>International Warranty Service<sup>9</sup></b></li> <li><b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li><b>ThinkPlus™ services at lenovo.com/thinkplus/warranty</b></li> <li><b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>																																			
<p><b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)</p> <p><b>Preloaded</b> • Rescue and Recovery™ • Access Program • Update Connector™.15 • Adobe Reader • Norton AntiVirus (OEM version) • PC-Doctor™ (diagnostics)</p> <p><b>Downloadable</b> • Software Delivery Assistant • System Migration Assistant • IBM Director Agent</p> <p><b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</p>	<p><b>Accessories</b></p> <table> <tr><td>256MB PC2-4200 CL4 NP DDR2 UDIMM</td><td>73P4970</td></tr> <tr><td>512MB PC2-4200 CL4 NP DDR2 UDIMM</td><td>73P4971</td></tr> <tr><td>1GB PC2-4200 CL4 NP DDR2 UDIMM</td><td>73P4972</td></tr> <tr><td>2GB PC2-4200 CL4 NP DDR2 UDIMM</td><td>73P4973</td></tr> <tr><td>160GB Serial ATA150 Disk (7200 rpm)</td><td>09N4254</td></tr> <tr><td>Multi-Burner Plus® (DVD±RW; internal)</td><td>73P3370</td></tr> <tr><td>USB 2.0 Memory Key 1GB</td><td>40Y7421</td></tr> <tr><td>ThinkVision® L151 15" Monitor (black)</td><td>9205AB2</td></tr> <tr><td>ThinkVision L171p 17" Monitor (black)</td><td>9417HB7</td></tr> <tr><td>ThinkVision L191p 19" Monitor (black)</td><td>9419HB7</td></tr> <tr><td>ThinkVision L200p 20.1" Monitor (black)</td><td>6736HC9</td></tr> <tr><td>ThinkVision C170 17" (16.0" vis) (black)</td><td>6737P6N</td></tr> <tr><td>ThinkVision C190 19" (18.0" vis) (black)</td><td>6739PON</td></tr> <tr><td>NVIDIA® GeForce 6200 64MB Dual Head</td><td>73P2517</td></tr> <tr><td>ATI® RADEON® X700 128MB Dual Head</td><td>73P2518</td></tr> <tr><td>Enh Perf Wireless Keyboard and Mouse</td><td>73P4067</td></tr> <tr><td>Enhanced Performance USB Keyboard</td><td>73P2620</td></tr> <tr><td>Preferred Pro USB Keyboard</td><td>73P5220</td></tr> </table> <p>Other options at <b>lenovo.com/options</b></p>	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973	160GB Serial ATA150 Disk (7200 rpm)	09N4254	Multi-Burner Plus® (DVD±RW; internal)	73P3370	USB 2.0 Memory Key 1GB	40Y7421	ThinkVision® L151 15" Monitor (black)	9205AB2	ThinkVision L171p 17" Monitor (black)	9417HB7	ThinkVision L191p 19" Monitor (black)	9419HB7	ThinkVision L200p 20.1" Monitor (black)	6736HC9	ThinkVision C170 17" (16.0" vis) (black)	6737P6N	ThinkVision C190 19" (18.0" vis) (black)	6739PON	NVIDIA® GeForce 6200 64MB Dual Head	73P2517	ATI® RADEON® X700 128MB Dual Head	73P2518	Enh Perf Wireless Keyboard and Mouse	73P4067	Enhanced Performance USB Keyboard	73P2620	Preferred Pro USB Keyboard	73P5220
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See footnotes for important warranty information  
US models announced April 19, 2005  
US models withdrawn effective August or December 2005



# ThinkCentre® A52 Tower (8153) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Execute disable	Memory <sup>a</sup>	SATA disk	EIDE optical	Graphics	Chipset	Cover switch	Key-board warranty <sup>1</sup>	Limited Gbl, Educ	Workhorse Avail	
A52	8153-12U	4x4	Pentium® 4 516	2.93	1MB	533			512MB	40GB <sup>2</sup>	CD	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-14U	4x4	Pentium 4 516	2.93	1MB	533			512MB	80GB	Combo	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-21U	4x4	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	40GB	CD	GMA 950	945G	No	Finger	1-yr	No	Jul 05
A52	8153-22U	4x4	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	80GB	CD	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-23U	4x4	Pentium 4 531	3.00	1MB	800	HT	XD	512MB	80GB	Combo	GMA 950	945G	No	Finger	1-yr	No	Jul 05
A52	8153-31U	4x4	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	80GB	CD	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-32U	4x4	Pentium 4 541	3.20	1MB	800	HT	XD	512MB	80GB	Combo	GMA 950	945G	No	Finger	1-yr	No	Jul 05
A52	8153-41U	4x4	Pentium 4 551	3.40	1MB	800	HT	XD	512MB	80GB	Combo	GMA 950	945G	No	Finger	1-yr	No	Jul 05
A52	8153-D1U	4x4	Pentium 4 630	3.00	2MB	800	HT	XD	512MB	80GB	CD	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-D2U	4x4	Pentium 4 630	3.00	2MB	800	HT	XD	512MB	80GB	Combo	GMA 950	945G	No	Finger	1-yr	No	Jul 05
A52	8153-E1U	4x4	Pentium 4 640	3.20	2MB	800	HT	XD	512MB	80GB	CD	GMA 950	945G	No	Pref	1-yr	No	Jul 05
A52	8153-E2U	4x4	Pentium 4 640	3.20	2MB	800	HT	XD	512MB	80GB	Combo	GMA 950	945G	No	Finger	1-yr	No	Jul 05

These small and medium business (SMB) models are part of the US TopSeller™ Program

<p><b>Positioning</b> <i>Quality, choice, and affordability</i></p> <p><b>Processor</b> <b>Intel® Pentium 4 Processor 516, 531, 541, 551, 630, or 640</b> with single-core, EM64T, and 533 or 800MHz system bus</p> <p><b>Processor features</b> <i>Some: Hyper-Threading (HT) technology, Execute Disable Bit (XD)</i></p> <p><b>L2 cache</b> <b>1MB or 2MB</b> std and max / ECC / full speed</p> <p><b>Implementation</b> Processor and L2 cache in FC-LGA4 in LGA775 socket</p> <p><b>Memory - std/max<sup>a</sup></b> <b>512MB std / 4GB max / DDR2 only</b></p> <p><b>Memory</b> Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</p> <p><b>Graphics</b> <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector</p> <p><b>SATA disk</b> <b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts</p> <p><b>SATA controller</b> Serial ATA / 300 MB/sec SATA300 / integrated in ICH7</p> <p><b>SATA cables</b> One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar</p> <p><b>EIDE CD</b> <i>Some: 48X-20X<sup>4</sup> CD-ROM</i></p> <p><b>EIDE Combo</b> <i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</i></p> <p><b>EIDE controller</b> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p> <p><b>EIDE cables</b> One 2-drop EIDE cable to optical / one connector on systemboard</p> <p><b>Diskette drive</b> 3.5" 1.44MB diskette drive</p> <p><b>Chipset</b> <b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log</p> <p><b>Front ports</b> Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p><b>Rear ports</b> Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p><b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p> <p><b>Audio</b> High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software</p> <p><b>Speaker</b> One internal speaker for business audio</p> <p><b>Ethernet</b> Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1</p> <p><b>Security chip</b> <b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant</p> <p><b>Keyboard</b> [Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black (one of following) [Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), blk</p> <p><b>Mouse</b> Optical Wheel Mouse (USB only), 400 dpi, black</p> <p><b>Cooling fans</b> Two variable speed fans (front and power supply)</p> <p><b>Power supply</b> 310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs</p> <hr/> <p><b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area)</p> <p><b>Preloaded</b></p> <ul style="list-style-type: none"> <li>Access Program</li> <li>Rescue and Recovery™</li> <li>Norton AntiVirus (OEM version)</li> <li>PC-Doctor™ (diagnostics)</li> <li>Client Security Software</li> <li>Multimedia Center for Think Offerings (combo models)</li> <li>RecordNow and DLA (combo models)</li> <li>InterVideo WinDVD (combo models)</li> </ul> <p><b>Downloadable</b></p> <ul style="list-style-type: none"> <li>Software Delivery Assistant</li> <li>System Migration Assistant</li> <li>IBM Director Agent</li> </ul> <p><b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</p> <hr/> <p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982</li> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Multi-Burner Plus® (DVD±RW; internal) 73P3370</li> <li>USB Fingerprint Reader 73P4774</li> <li>USB Gemplus GemPC Smart Card Reader 41N3040</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>USB 2.0 Super Multi-Burner Drive 40Y8638</li> <li>USB 2.0 Portable 80GB Hard Disk 40Y8726</li> <li>ThinkVision® C190 19" (18.0" vis) (black) 6739P0N</li> <li>ThinkVision L171p 17" Monitor (black) 9417HB2</li> <li>ThinkVision L192p 19" Monitor (black) 9419HB2</li> <li>ThinkVision L201p 20.1" Monitor (black) 9320HB1</li> <li>Kensington® MicroSaver® Desktop Lock 06P3839</li> <li>Enh Perf Wireless Keyboard and Mouse 73P4067</li> <li>Preferred Pro USB Fingerprint Keyboard 73P4730</li> <li>NVIDIA® GeForce 6200 64MB Dual Head 73P2517</li> <li>ATI® RADEON® X300 SE 128MB Dual Head 40Y8405</li> <li>ATI RADEON X700 128MB Dual Head 73P2518</li> <li>Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></li> </ul> <hr/> <p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington MicroSaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password (user and master)</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> <li>Some: fingerprint reader keyboard</li> </ul> <hr/> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>➤ <b>1-year parts and labor</b></li> <li>➤ <b>International Warranty Service<sup>9</sup></b></li> <li>➤ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>➤ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 41C9188)</li> </ul> </li> <li>➤ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>➤ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>  <p>Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk</p> <p>Slot 1: full-length, full-height, PCI Express x16 (75w max) Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>• PC 2001-compliant • ACPI 2.0c-compliant • SMBIOS 2.3.4-compliant • DMI 2.0 and SMBus 2.0-compliant • Asset ID<sup>19</sup> (system specific info in chip)</p>
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See footnotes for important warranty information  
US models announced June 28, 2005  
US models withdrawn effective May 2006

Name	Type	Slot x bay	Processor	L2 cache	Bus MHz	Hyper-Thread	Execute disable	Memory <sup>8</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Key-board	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date		
A52	8157-12U	2x3	Pentium® 4	531	3.00	1MB	800	HT	XD	512MB	Diskette	80GB <sup>2</sup>	CD	GMA 950	Yes	Pref	3-yr	No	Jul 05

These small and medium business (SMB) models are part of the US TopSeller™ Program

<p>Positioning Processor</p> <p><b>Quality, choice, and affordability</b> <b>Intel® Pentium 4 Processor 531</b> with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit (XD), and 800MHz system bus</p> <p>L2 cache Implementation</p> <p>Processor and L2 cache in FC-LGA4 in LGA775 socket</p>	<p>Small</p>																																																																																																	
<p>Memory - std/max<sup>9</sup></p> <p>512MB std / 4GB max / <b>DDR2 only</b></p> <p>Memory</p> <p>Two 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</p>	<p>Bay ① 3.5", slim .5", access, std diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v) Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only)</p>																																																																																																	
<p>Graphics</p> <p><b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector</p>	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• With vertical stand: 5.0" W X 15.4"D X 13.6"H</li> <li>• With vertical stand: 127mm W X 390mm D X 346mm H</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System stand for vertical orientation</li> </ul>																																																																																																	
<p>SATA disk</p> <p><b>80GB</b> / SATA150 7200 rpm / vibration dampening mounts</p> <p>SATA controller</p> <p>Serial ATA / 300 MB/sec SATA300 / integrated in ICH7</p> <p>SATA cables</p> <p>One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar</p> <p>EIDE CD</p> <p>48X-20X<sup>4</sup> CD-ROM</p> <p>EIDE controller</p> <p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p> <p>EIDE cables</p> <p>One 2-drop EIDE cable to optical / one connector on systemboard</p> <p>Diskette drive</p> <p>3.5" 1.44MB diskette drive</p>	<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• Cover intrusion switch</li> </ul>																																																																																																	
<p>Chipset</p> <p><b>Intel 945G Express Chipset</b> / 82945G Graphics Mem Cont Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond<sup>®</sup> PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log</p>	<p>ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p>																																																																																																	
<p>Front ports</p> <p>Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Rear ports</p> <p>Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p>Rear audio ports</p> <p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p> <p>Audio</p> <p>High Definition (HD) Audio / AD1981HD codec / SoundMAX<sup>®</sup> Cadenza software</p> <p>Speaker</p> <p>One internal speaker for business audio</p> <p>Ethernet</p> <p>Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1</p> <p>Security chip</p> <p><b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant</p>	<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>																																																																																																	
<p>Keyboard</p> <p>[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p> <p>Mouse</p> <p>Optical Wheel Mouse (USB only), 400 dpi, black</p> <p>Cooling fans</p> <p>Three variable speed fans (two front and one power supply)</p> <p>Power supply</p> <p>225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs</p>	<table border="1"> <thead> <tr> <th>Preload with Windows XP Professional<sup>5</sup></th> <th>Accessories</th> <th></th> </tr> </thead> <tbody> <tr> <td>Microsoft® Windows® XP Professional with Service Pack 2</td> <td>256MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4982</td> </tr> <tr> <td>- Disk-to-Disk Recovery (in hidden protected area)</td> <td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4983</td> </tr> <tr> <td></td> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td></td> <td>2GB PC2-4200 CL4 NP DDR2 UDIMM</td> <td>73P4973</td> </tr> <tr> <td></td> <td>160GB Serial ATA300 Disk (7200 rpm)</td> <td>09N4254</td> </tr> <tr> <td></td> <td>250GB Serial ATA300 Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td></td> <td>Multi-Burner Plus<sup>6</sup> (DVD±RW; internal)</td> <td>73P3370</td> </tr> <tr> <td></td> <td>USB Portable Diskette Drive</td> <td>05K9276</td> </tr> <tr> <td></td> <td>USB Fingerprint Reader</td> <td>73P4774</td> </tr> <tr> <td></td> <td>USB 2.0 Memory Key 512MB</td> <td>40Y8596</td> </tr> <tr> <td></td> <td>USB 2.0 Memory Key 1GB</td> <td>40Y7421</td> </tr> <tr> <td></td> <td>USB 2.0 CD-RW/DVD-ROM Combo II Drive</td> <td>40Y8637</td> </tr> <tr> <td></td> <td>USB 2.0 Portable 80GB Hard Disk</td> <td>40Y8726</td> </tr> <tr> <td></td> <td>USB 2.0 Super Multi-Burner Drive</td> <td>40Y8638</td> </tr> <tr> <td></td> <td>ThinkVision® C170 17" (16.0" vis) (black)</td> <td>6737P6N</td> </tr> <tr> <td></td> <td>ThinkVision C190 19" (18.0" vis) (black)</td> <td>6739P0N</td> </tr> <tr> <td></td> <td>ThinkVision L151 15" Monitor (black)</td> <td>9205AB6</td> </tr> <tr> <td></td> <td>ThinkVision L151p 15" Monitor (black)</td> <td>9205HB2</td> </tr> <tr> <td></td> <td>ThinkVision L171 17" Monitor (black)</td> <td>9417AB1</td> </tr> <tr> <td></td> <td>ThinkVision L171p 17" Monitor (black)</td> <td>9417HB2</td> </tr> <tr> <td></td> <td>ThinkVision L192p 19" Monitor (black)</td> <td>9419HB2</td> </tr> <tr> <td></td> <td>ThinkVision L201p 20.1" Monitor (black)</td> <td>9320HB1</td> </tr> <tr> <td></td> <td>Belkin® 800VA UPS with AVR technology</td> <td>31P7662</td> </tr> <tr> <td></td> <td>ScrollPoint Pro Optical Mouse (black)</td> <td>31P8700</td> </tr> <tr> <td></td> <td>Optical 3-button ScrollPoint Mouse (black)</td> <td>31P7405</td> </tr> <tr> <td></td> <td>Kensington® MicroSaver® Desktop Lock</td> <td>06P3839</td> </tr> <tr> <td></td> <td>Enhanced Performance USB Keyboard</td> <td>73P2620</td> </tr> <tr> <td></td> <td>Enh Perf Wireless Keyboard and Mouse</td> <td>73P4067</td> </tr> <tr> <td></td> <td>Preferred Pro USB Fingerprint Keyboard</td> <td>73P4730</td> </tr> <tr> <td></td> <td>DVI-I PCIe Connection Adapter (ADD2)</td> <td>73P2516</td> </tr> <tr> <td></td> <td colspan="2">Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></td> </tr> </tbody> </table>		Preload with Windows XP Professional <sup>5</sup>	Accessories		Microsoft® Windows® XP Professional with Service Pack 2	256MB PC2-5300 CL5 NP DDR2 UDIMM	73P4982	- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984		2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973		160GB Serial ATA300 Disk (7200 rpm)	09N4254		250GB Serial ATA300 Disk (7200 rpm)	41N3015		Multi-Burner Plus <sup>6</sup> (DVD±RW; internal)	73P3370		USB Portable Diskette Drive	05K9276		USB Fingerprint Reader	73P4774		USB 2.0 Memory Key 512MB	40Y8596		USB 2.0 Memory Key 1GB	40Y7421		USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637		USB 2.0 Portable 80GB Hard Disk	40Y8726		USB 2.0 Super Multi-Burner Drive	40Y8638		ThinkVision® C170 17" (16.0" vis) (black)	6737P6N		ThinkVision C190 19" (18.0" vis) (black)	6739P0N		ThinkVision L151 15" Monitor (black)	9205AB6		ThinkVision L151p 15" Monitor (black)	9205HB2		ThinkVision L171 17" Monitor (black)	9417AB1		ThinkVision L171p 17" Monitor (black)	9417HB2		ThinkVision L192p 19" Monitor (black)	9419HB2		ThinkVision L201p 20.1" Monitor (black)	9320HB1		Belkin® 800VA UPS with AVR technology	31P7662		ScrollPoint Pro Optical Mouse (black)	31P8700		Optical 3-button ScrollPoint Mouse (black)	31P7405		Kensington® MicroSaver® Desktop Lock	06P3839		Enhanced Performance USB Keyboard	73P2620		Enh Perf Wireless Keyboard and Mouse	73P4067		Preferred Pro USB Fingerprint Keyboard	73P4730		DVI-I PCIe Connection Adapter (ADD2)	73P2516		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
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See footnotes for important warranty information  
US model announced June 28, 2005  
US model withdrawn effective May 2006

# ThinkCentre® A52 Desktop (8163) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Bus MHz	EM64T	Memory <sup>5</sup>	Diskette drive	SATA disk	EIDE optical	Graphics	Cover switch	Key-board	Floor stand	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date						
<b>A52</b>	8163-12U	3x3	Pentium® 4 531	3.00	1MB	800	EM64T 512MB	Diskette	80GB <sup>2</sup>	CD	GMA 950	No	Finger	No	1-year	No	Aug 05						
<b>A52</b>	8163-13U	3x3	Pentium 4 541	3.20	1MB	800	EM64T 512MB	Diskette	80GB	CD	GMA 950	No	Finger	No	1-year	No	Aug 05						
<b>A52</b>	8163-14U	3x3	Pentium 4 551	3.40	1MB	800	EM64T 512MB	Diskette	80GB	CD	GMA 950	No	Finger	No	1-year	No	Aug 05						
<b>Positioning</b> <b>Processor</b> <i>Quality, choice, and affordability</i> <b>Intel® Pentium 4 Processor 531, 541, or 551</b> with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit (XD), and 800MHz system bus												<b>Desktop</b> 											
<b>L2 cache Implementation</b> <b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket												Bay ① 5.25", HH 1.6", access, std or opt optical Bay ② 3.5", SL 1", access, std or opt diskette Bay ③ 3.5", SL 1", no access, std disk											
<b>Memory - std/max<sup>5</sup></b> <b>512MB std / 4GB max / DDR2 only</b> <b>Memory</b> Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable												Slot 1: full-length (170mm), low-profile, PCI Express x16 (25w max), supports optional ADD2 card Slot 2: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)											
<b>Graphics</b> <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector												<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.8" W X 15.2"D X 4.2"H</li> <li>• 350mm W X 385mm D X 108mm H</li> <li>• With vertical stand: 5.9" W X 15.2"D X 15.0"H</li> <li>• With vertical stand: 150mm W X 385mm D X 380mm H</li> <li>• 18.5 to 22.0 lb (8.4 to 10.0 kg)</li> <li>• All three bays flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI)</li> <li>• Toolless systemboard and adapter retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> </ul>											
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<b>Front ports</b> Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) <b>Rear ports</b> Six USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) <b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) <b>Audio</b> High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software <b>Speaker</b> One internal speaker for business audio <b>Ethernet</b> Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 <b>Security chip</b> <b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant												<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• U-bolt anchoring feature (U-bolt is optional; supports optional padlock)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• Fingerprint reader keyboard</li> </ul>											
<b>Keyboard</b> [Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black <b>Mouse</b> Optical Wheel Mouse (USB only), 400 dpi, black <b>Cooling fans</b> Three variable speed fans (two front and one power supply) <b>Power supply</b> 225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs												<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional with Service Pack 2 - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> <ul style="list-style-type: none"> <li>• Access Program</li> <li>• Rescue and Recovery™</li> <li>• Adobe Reader</li> <li>• Norton AntiVirus (OEM version)</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Client Security Software</li> </ul> <b>Downloadable</b> <ul style="list-style-type: none"> <li>• Software Delivery Assistant</li> <li>• System Migration Assistant</li> <li>• IBM Director Agent</li> </ul> <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client						<b>Accessories</b> 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Multi-Burner Plus® (DVD±RW; internal) 73P3370 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 73P4774 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Memory Key 512MB 40Y8596 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 40Y8638 ThinkVision® C190 19" (18.0" vis) (black) 6739P0N ThinkVision L151 15" Monitor (black) 9205AB6 ThinkVision L151p 15" Monitor (black) 9205HB2 ThinkVision L171 17" Monitor (black) 9417AB1 ThinkVision L171p 17" Monitor (black) 9417HB2 ThinkVision L192p 19" Monitor (black) 9419HB2 ThinkVision L201p 20.1" Monitor (black) 9320HB1 Belkin® 800VA UPS with AVR technology 31P7662 USB Optical Wheel Mouse (black) 06P4069 ScrollPoint Pro Optical Mouse (black) 31P8700 Optical 3-button ScrollPoint Mouse (black) 31P7405 Kensington® MicroSaver® Desktop Lock 06P3839 Enhanced Performance USB Keyboard 73P2620 Enh Perf Wireless Keyboard and Mouse 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 DVI-I PCIe Connection Adapter (ADD2) 73P2516 ATI® RADEON® X300 SE 128MB Dual Head 40Y8405 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>					
ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>												<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↪ <b>Post-warranty maintenance services at</b>  <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> <ul style="list-style-type: none"> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul> </li> </ul>											

See footnotes for important warranty information  
 US models announced August 23, 2005  
 US models withdrawn effective May 2006

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 (BL5) May 2006

# ThinkCentre® A52 Tower (8168) - Pentium 4 - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	SATA Memory <sup>a</sup>	EIDE disk	Modem	Ext Graphics	Key-Preload	Limited warranty <sup>1</sup>	Workhorse Avail
A52	8168-24U	4x4	Pentium® 4 531	3.00	1MB	800	HT	512MB	40GB <sup>2</sup>	CD	GMA Modem	Spkrs Pref	XP Home	1-yr No Jul 05
A52	8168-25U	4x4	Pentium 4 531	3.00	1MB	800	HT	512MB	80GB	CD	GMA	Pref	XP Pro	1-yr No Jul 05
A52	8168-26U	4x4	Pentium 4 531	3.00	1MB	800	HT	512MB	80GB	CD-RW	GMA Modem	Spkrs	Finger XP Home	1-yr No Jul 05
A52	8168-32U	4x4	Pentium 4 541	3.20	1MB	800	HT	512MB	80GB	CD	GMA Modem	Pref	XP Home	1-yr No Jul 05
A52	8168-33U	4x4	Pentium 4 541	3.20	1MB	800	HT	512MB	80GB	Combo	GMA	Finger	XP Pro	1-yr No Jul 05
A52	8168-41U	4x4	Pentium 4 551	3.40	1MB	800	HT	512MB	80GB	DVD±RW <sup>5</sup>	GMA Modem	Finger	XP Pro	1-yr No Jul 05
A52	8168-D1U	4x4	Pentium 4 630	3.00	2MB	800	HT	512MB	80GB	Combo	GMA	Pref	XP Pro	1-yr No Jul 05
A52	8168-E1U	4x4	Pentium 4 640	3.20	2MB	800	HT	512MB	80GB	Combo	GMA	Finger	XP Pro	1-yr No Jul 05

Positioning Processor	<i>Quality, choice, and affordability</i> <b>Intel® Pentium 4 Processor 531, 541, 551, 630, or 640</b> with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit (XD), and 800MHz system bus	<b>Tower</b>	
L2 cache Implementation	<b>1MB or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	<ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>	
Memory - std/max <sup>8</sup>	<b>512MB std / 4GB max / DDR2 only</b>	<p>Bay ① 5.25", HH 1.6", access, std optical</p> <p>Bay ② 5.25", HH 1.6", access, open</p> <p>Bay ③ 3.5", SL 1", access, std diskette</p> <p>Bay ④ 3.5", SL 1", no access, std disk</p> <p>Slot 1: full-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 2: full-length, full-height, PCI Express x1</p> <p>Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v)-modem*</p> <p>Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>* modem in slot in some models</p>	
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	<ul style="list-style-type: none"> <li>PC 2001-compliant</li> <li>ACPI 2.0c-compliant</li> <li>SMBIOS 2.3.4-compliant</li> <li>DMI 2.0-compliant</li> <li>SMBus 2.0-compliant</li> <li>Asset ID<sup>19</sup> (system specific info in chip)</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector		
SATA disk	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar		
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM		
EIDE CD-RW	<i>Some:</i> 48X/32X/48X Max <sup>4</sup> CD-RW		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370)		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard		
Diskette drive	3.5" 1.44MB diskette drive		
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software		
External speakers	<i>Some:</i> External active speakers / Jazz Infinity® / 2-piece / 3 watts / black color		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1		
Modem	<i>Some:</i> 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter		
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant		
Keyboard (one of following)	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black		
Mouse	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Cooling fans	Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	Two variable speed fans (front and power supply)		
	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		

Preload with Windows XP Home <sup>5</sup>	Accessories
Microsoft® Windows® XP Home Edition with Service Pack 2	256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982
- Disk-to-Disk Recovery	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983
<b>Preload with Windows XP Professional<sup>5</sup></b>	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984
Microsoft Windows XP Professional with Service Pack 2	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973
- Disk-to-Disk Recovery	250GB Serial ATA300 Disk (7200 rpm) 41N3015
<b>Preloaded (all)</b>	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370
• Access Program	USB Fingerprint Reader 73P4774
• Rescue and Recovery™	USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
• Adobe Reader	USB 2.0 Memory Key 1GB 40Y7421
• Norton AntiVirus (OEM version)	ThinkVision® C190 19" (18.0" vis) (black) 6739P0N
• PC-Doctor™ (diagnostics)	ThinkVision L151 15" Monitor (black) 9205AB6
• Client Security Software	ThinkVision L151p 15" Monitor (black) 9205HB2
• Multimedia Center for Think Offerings (CD-RW, combo, DVD±RW)	ThinkVision L171p 17" Monitor (black) 9417HB2
• RecordNow and DLA (CD-RW, combo, DVD±RW)	ThinkVision L192p 19" Monitor (black) 9419HB2
• InterVideo WinDVD (combo, DVD±RW)	ThinkVision L201p 20.1" Monitor (black) 9320HB1
• InterVideo WinDVD Creator (DVD±RW)	Kensington® MicroSaver® Desktop Lock 06P3839
<b>License</b> - CD not included	ScrollPoint Pro Optical Mouse (black) 31P8700
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	Enh Perf Wireless Keyboard and Mouse 73P4067
	Preferred Pro USB Fingerprint Keyboard 73P4730
	DVI-I PCIe Connection Adapter (ADD2) 73P2516
	NVIDIA® GeForce® 6200 64MB Dual Head 73P2517
	ATI® RADEON® X300 SE 128MB Dual Head 40Y8405
	ATI RADEON X700 128MB Dual Head 73P2518
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>

See footnotes for important warranty information  
US models announced June 28, 2005  
US models withdrawn effective May 2006

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# ThinkCentre® A52 Tower (8168) - Pentium D - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Slot x	Name	Type-model	bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Dual core	Memory <sup>6</sup>	SATA disk	EIDE optical	Graphics	FireWire adapter	Key-Preload board	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A52	8168-D6U	4x4	Pentium® D 820	2.80	2x1MB	800	No	Dual	512MB	80GB <sup>2</sup>	Combo	X700		Pref	XP Pro <sup>5</sup>	1-yr	No	Jul 05
A52	8168-D7U	4x4	Pentium D 820	2.80	2x1MB	800	No	Dual	512MB	160GB	DVD±RW <sup>6</sup>	X700	1394	Finger	XP Pro	1-yr	No	Jul 05

Positioning	<b>Quality, choice, and affordability</b>													<b>optical</b> ② <b>diskette</b> <b>disk</b> 		
Processor	<b>Intel® Pentium D Processor 820 (2.80GHz)</b> with dual-core, EM64T, Execute Disable Bit, and 800MHz system bus <b>Two x 1MB</b> (dual-core) std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket															
L2 cache Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket													<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7"D X 17.0"H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>		
Memory - std/max <sup>5</sup>	<b>512MB std</b> / 4GB max / <b>DDR2 only</b> Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable															
Memory	Four 240-pin gold plated DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable															
Graphics	<b>ATI® RADEON® X700</b> / PCI Express x16 adapter / <b>128MB</b> 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support															
SATA disk	<b>80 or 160GB</b> / SATA150 7200 rpm / vibration dampening mounts													Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6" access, open Bay ③ 3.5", SL 1", access, std diskette Bay ④ 3.5", SL 1", no access, std disk Slot 1: full-length, full-height, PCI Express x16 - used Slot 2: full-length, full-height, PCI Express x1 Slot 3: full-length, full-height, 32-bit PCI 2.3 (5v) - used* Slot 4: full-length, full-height, 32-bit PCI 2.3 (5v) * FireWire adapter in slot in some models		
SATA controller	Serial ATA / 300 MB/sec SATA300 / integrated in ICH7															
SATA cables	One SATA cable (one 1-drop to disk) / 4 SATA connectors on planar															
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo															
EIDE DVD±RW	Some: DVD and CD burner / Multi-Burner Plus (part 73P3370)															
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)															
EIDE cables	One 2-drop EIDE cable to optical / one connector on systemboard															
Diskette drive	3.5" 1.44MB diskette drive															
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / Winbond® PC8375S Super I/O for security chip (TPM), Asset ID, serial, parallel, diskette, keybrd, mouse, auto-thermal controls, hardware event log															
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													<ul style="list-style-type: none"> <li>• PC 2001-compliant</li> <li>• ACPI 2.0c-compliant</li> <li>• SMBIOS 2.3.4-compliant</li> <li>• DMI 2.0-compliant</li> <li>• SMBus 2.0-compliant</li> <li>• Asset ID<sup>19</sup> (system specific info in chip)</li> </ul> <p style="text-align: center;"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password (user and master)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> <li>• Some: fingerprint reader keyboard</li> </ul>		
Rear ports	Six USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)															
Audio	High Definition (HD) Audio / AD1981HD codec / SoundMAX® Cadenza software															
Speakers	External active speakers / Jazz Infinity® / 2-piece / 3 watts / black color															
Beeper	One internal beeper															
IEEE 1394	Some: FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, 4-pin port on front of system, no external cables included															
Ethernet	Gigabit ethernet on systemboard / Intel 82573E (MAC/PHY) / PCIe x1 / full duplex / Wake on LAN® / PXE 2.0 and RPL remote boot															
Modem	None															
Security chip	<b>Trusted Platform Module</b> / in NS PC8375S chip / TCG 1.2-compliant															
Keyboard	[Finger] Preferred Pro USB Fingerprint Keyboard (USB connector), black													ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a> <p style="text-align: center;"><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇨ 1-year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>⇨ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇨ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>		
(one of following)	[Pref] 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), blk															
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black															
Cooling fans	Two variable speed fans (front and power supply)															
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs															
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>															
Microsoft® Windows® XP Professional with Service Pack 2	256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982															
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983															
	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984															
	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973															
<b>Preloadable</b>	250GB Serial ATA300 Disk (7200 rpm) 41N3015															
• Access Program	Multi-Burner Plus <sup>6</sup> (DVD±RW; internal) 73P3370															
• Rescue and Recovery™	USB Portable Diskette Drive 05K9276															
• Adobe Reader	USB Fingerprint Reader 73P4774															
• Norton AntiVirus (OEM version)	USB Gemplus GemPC Smart Card Reader 41N3040															
• PC-Doctor™ (diagnostics)	USB 2.0 Memory Key 1GB 40Y7421															
• Client Security Software	USB 2.0 Super Multi-Burner Drive 40Y8638															
• Multimedia Center for Think Offerings (combo, DVD±RW models)	ThinkVision® C170 17" (16.0" vis) (black) 6737P6N															
• RecordNow and DLA (combo, DVD±RW)	ThinkVision C190 19" (18.0" vis) (black) 6739P0N															
• InterVideo WinDVD (combo, DVD±RW)	ThinkVision L151 15" Monitor (black) 9205AB6															
• InterVideo WinDVD Creator (DVD±RW)	ThinkVision L171p 17" Monitor (black) 9417HB2															
	ThinkVision L192p 19" Monitor (black) 9419HB2															
	ThinkVision L201p 20.1" Monitor (black) 9320HB1															
<b>Downloadable</b>	Belkin® 800VA UPS with AVR technology 31P7662															
• Software Delivery Assistant	ScrollPoint Pro Optical Mouse (black) 31P8700															
• System Migration Assistant	Optical 3-button ScrollPoint Mouse (black) 31P7405															
• IBM Director Agent	Kensington® MicroSaver® Desktop Lock 06P3839															
	Enhanced Performance USB Keyboard 73P2620															
	Enh Perf Wireless Keyboard and Mouse 73P4067															
<b>License</b> - CD not included	Preferred Pro USB Fingerprint Keyboard 73P4730															
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	DVI-I PCIe Connection Adapter (ADD2) 73P2516															
	NVIDIA® GeForce 6200 64MB Dual Head 73P2517															
	ATI® RADEON® X300 SE 128MB Dual Head 40Y8405															
	ATI RADEON X700 128MB Dual Head 73P2518															
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>															

See footnotes for important warranty information  
US models announced June 28, 2005  
US models withdrawn effective May 2006

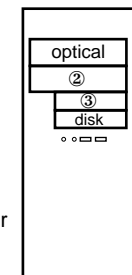
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# ThinkCentre® A52 Tower (8287) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Memory <sup>5</sup>	Diskette Drive	SATA disk	EIDE optical	FireWire	Int or ext speaker	Limited warranty <sup>1</sup>	Avail date		
<b>A52</b>	8287-D3U	4x4	Pentium® 4	630	3.00	2MB	single HT	512MB	None	40GB <sup>2</sup>	Combo	GMA 950	Ext spks	XP Home	1-yr	Jan 06	
<b>A52</b>	8287-D4U	4x4	Pentium 4	630	3.00	2MB	single HT	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-D5U	4x4	Pentium 4	630	3.00	2MB	single HT	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-D6U	4x4	Pentium 4	630	3.00	2MB	single HT	512MB	None	80GB	DVD±RW <sup>6</sup>	GMA 950	1394	Ext spks	XP Home	1-yr	Jan 06
<b>A52</b>	8287-E1U	4x4	Pentium 4	640	3.20	2MB	single HT	512MB	None	40GB	CD	GMA 950	Internal	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-E2U	4x4	Pentium 4	640	3.20	2MB	single HT	512MB	None	80GB	Combo	GMA 950	Ext spks	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-E3U	4x4	Pentium 4	640	3.20	2MB	single HT	512MB	None	160GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro	1-yr	Jan 06
<b>A52</b>	8287-F1U	4x4	Pentium 4	650	3.40	2MB	single HT	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-F2U	4x4	Pentium 4	650	3.40	2MB	single HT	512MB	None	80GB	Combo	GMA 950	Ext spks	XP Pro	1-yr	Jan 06	
<b>A52</b>	8287-F3U	4x4	Pentium 4	650	3.40	2MB	single HT	512MB	None	250GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro	1-yr	Jan 06
<b>A52</b>	8287-G1U	4x4	Pentium D	820	2.80	2x1MB	dual	512MB	None	250GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro	1-yr	Jan 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	<i>Quality, reliability, and manageability</i> <b>Intel® Pentium 4 Processor 630, 640, 650</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST, Execute Disable Bit, 800MHz system bus, and 2MB L2 cache, or <b>Intel® Pentium D Processor 820 (2.80GHz)</b> with <b>dual-core</b> , EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache</b> (not shared) Processor and L2 cache in FC-LGA4 in LGA775 socket	<b>Tower</b>	
Implementation		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7"D X 17.0"H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>	
Memory - std/max <sup>5</sup> Memory	<b>512MB std / 4GB max</b> Four 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	<ul style="list-style-type: none"> <li>• Bay ① 5.25", HH 1.6", access, std optical</li> <li>• Bay ② 5.25", HH 1.6" access, open</li> <li>• Bay ③ 3.5", SL 1", access, open</li> <li>• Bay ④ 3.5", SL 1", no access, std disk</li> </ul>	
Graphics (one of following)	<ul style="list-style-type: none"> <li>• <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G / 400MHz / supports dual independent display</li> <li>• <b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>128MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>	<p>Slot 1: 3/4-length, full-height, PCI Express x16 (75w max) Slot 2: 3/4-length, full-height, PCI Express x1 Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)</p>	
SATA disk	<b>40, 80, 160, or 250GB</b> / SATA150 7200 rpm / vibration dampening		
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in ICH7		
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar		
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM		
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)		
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / 1 planar connector		
Diskette drive	None / use optional external USB-based diskette drive		
Chipset	<b>Intel 945G Express Chipset /</b> 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O		
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)		
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software		
External speakers	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo		
Speaker	<i>Some:</i> [Internal] one internal speaker for business audio		
IEEE 1394	<i>Some:</i> FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, 4-pin port on front of system, no external cables included		
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5789 / PCIe x1 / Wake on LAN		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Home<sup>5</sup></b>	Microsoft® Windows® XP Home Edition - Disk-to-Disk Recovery	<b>Accessories</b>	
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft Windows XP Professional - Disk-to-Disk Recovery	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 160GB Serial ATA300 Disk (7200 rpm) 09N4254 Super Multi-Burner DL DVD±RW Drive 41N5581 USB 2.0 Portable Multi-Burner Drive 22P9163 USB 2.0 Super Multi-Burner Drive 40Y8638 USB 2.0 Lenovo Webcam 40Y8519 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 DVI-I PCIe Connection Adapter (ADD2) 73P2516 NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X300 SE 128MB Dual Head 41U4813 ATI RADEON X700 128MB Dual Head 73P2518 ATI X1600 Pro 256MB VGA/DVI-I/TV-out 41A4073	
<b>Preloaded</b> (all; only some listed)			
<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• Symantec® Client Security™</li> <li>• Diskkeeper Lite</li> <li>• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
			<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) - No keylock</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>
			ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
			<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇐ <b>1-year parts and labor</b></li> <li>⇐ <b>International Warranty Service<sup>9</sup></b></li> <li>⇐ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇐ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul> </li> <li>⇐ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇐ <b>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇐ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>

See footnotes for important warranty information  
US models announced January 10, 2006  
US models withdrawn effective December 2006

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(PK1-1) December 2006

# ThinkCentre® A52 Tower (8287) - TopSeller (February 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Memory <sup>9</sup>	Diskette Drive	SATA disk	EIDE optical	FireWire Graphics adapter	Int or ext speaker	Limited warranty <sup>1</sup>	Avail date
A52	8287-42U	4x4	Pentium® 4 521	2.8	1MB	single	HT	512MB	None	160GB <sup>2</sup>	DVD±RW <sup>6</sup>	GMA 950	Internal	XP Pro	1-yr Feb 06
A52	8287-47U	4x4	Pentium 4 521	2.8	1MB	single	HT	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr Feb 06
A52	8287-49U	4x4	Pentium 4 521	2.8	1MB	single	HT	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr Feb 06
A52	8287-H8U	4x4	Pentium 4 661	3.6	2MB	single	HT	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr Feb 06
A52	8287-H9U	4x4	Pentium 4 661	3.6	2MB	single	HT	512MB	None	80GB	Combo	GMA 950	Ext spks	XP Pro	1-yr Feb 06
A52	8287-HBU	4x4	Pentium 4 661	3.6	2MB	single	HT	512MB	None	250GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro 1-yr Feb 06
A52	8287-81U	4x4	Pentium D 920	2.80	2x2MB	dual		512MB	None	250GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro 1-yr Feb 06
A52	8287-91U	4x4	Pentium D 930	3.00	2x2MB	dual		512MB	None	250GB	DVD±RW	X300 SE	1394	Ext spks	XP Pro 1-yr Feb 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning	<i>Quality, reliability, and manageability</i> <b>Intel® Pentium 4 Processor 521 or 661</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 800MHz bus, and 1MB or 2MB L2 cache, or <b>Intel Pentium D Processor 920 or 930</b> with <b>dual-core</b> , EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x2MB L2 cache</b> Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket												Tower	
Implementation													<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7" D X 17.0" H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>	
Memory - std/max <sup>9</sup>	<b>512MB std</b> / 4GB max Four 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable													
Graphics (one of following)	<ul style="list-style-type: none"> <li>• <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G / 400MHz / supports dual independent display</li> <li>• <b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>128MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>												Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", no access, std disk  Slot 1: 3/4-length, full-height, PCI Express x16 (75w max) Slot 2: 3/4-length, full-height, PCI Express x1 Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)	
SATA disk	<b>80, 160, or 250GB</b> / SATA300 7200 rpm / vibration dampening SATA controller Serial ATA / 300MB/sec SATA300 / integrated in ICH7 SATA cables One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar EIDE CD <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM EIDE Combo <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo EIDE DVD±RW <i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370) EIDE controller Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) EIDE cables One 2-drop EIDE 80-conductor cable to optical / 1 planar connector Diskette drive None / use optional external USB-based diskette drive													
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O												<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>	
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)													
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software													
External speakers	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo													
Speaker	<i>Some:</i> [Internal] one internal speaker for business audio													
IEEE 1394	<i>Some:</i> FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, 4-pin port on front of system, no external cables included													
Ethernet	Gigabit ethernet on systemboard / Broadcom BCM5789 / PCIe x1 / Wake on LAN													
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black													
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs													
<b>Preload with Windows XP Professional<sup>5</sup> Accessories</b>													<b>LIMITED WARRANTY<sup>1</sup></b>	
Microsoft® Windows® XP Professional			256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970	↷ <b>1-year parts and labor</b>									
- Disk-to-Disk Recovery			512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971	↷ <b>International Warranty Service<sup>9</sup></b>									
<b>Preloaded</b> (only some listed)			1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972	↷ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>									
• Rescue and Recovery™			2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973	↷ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>									
• Access Connections™			256MB PC2-5300 CL5 NP DDR2 UDIMM	73P4982	• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)									
• Client Security Solution™			512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)									
• ThinkVantage Productivity Center			1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)									
• ThinkVantage System Update			250GB Serial ATA300 Disk (7200 rpm)	41N3015	↷ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b>									
• Symantec® Client Security™			Super Multi-Burner DL DVD±RW Drive	41N5581	↷ <b>Post-warranty maintenance services at lenovo.com/thinkplus/warranty</b>									
• Diskeeper Lite			USB Portable Diskette Drive	05K9276	↷ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b>									
• PC-Doctor™ (diagnostics)			USB Fingerprint Reader	41U3167										
• Google Desktop			USB 2.0 Memory Key 1GB	40Y7421										
• Multimedia Center for Think Offerings (combo, DVD±RW)			USB 2.0 Super Multi-Burner Drive	40Y8638										
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)			Lenovo L192 Wide 19" Monitor (black)	6920AB1										
• InterVideo WinDVD (combo, DVD±RW)			ThinkVision® L201p 20.1" Monitor (black)	9220HB1										
• InterVideo WinDVD Creator (DVD±RW)			Kensington® MicroSaver® Desktop Lock	06P3839										
<b>License</b> - CD not included			DVI-I PCIe Connection Adapter (ADD2)	73P2516										
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			NVIDIA® GeForce 6200 64MB Dual Head	73P2517										
			ATI® RADEON® X300 SE 128MB Dual Head	41U4813										
			ATI RADEON X700 128MB Dual Head	73P2518										
			ATI X1600 Pro 256MB VGA/DVI-I/TV-out	41A4073										
			Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>											

See footnotes for important warranty information  
US models announced February 21, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Tower (8287) - TopSeller (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Hyper-Thread Memory <sup>a</sup>	Diskette Drive	SATA disk	EIDE optical	Graphics	Preload warranty <sup>b</sup>	Limited Workhorse Gbl, Educ	Avail date
A52	8287-2AU	4x4	Pentium® 4 524	3.06	1MB	Single	HT 512MB	None	80GB	CD	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-2BU	4x4	Pentium 4 524	3.06	1MB	Single	HT 512MB	None	80GB	Combo	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-2CU	4x4	Pentium 4 524	3.06	1MB	Single	HT 512MB	None	160GB	DVD±RW	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-2DU	4x4	Pentium 4 524	3.06	1MB	Single	HT 1GB	None	160GB	DVD±RW	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-54U	4x4	Pentium 4 541	3.20	1MB	Single	HT 512MB	None	80GB	CD	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-55U	4x4	Pentium 4 541	3.20	1MB	Single	HT 512MB	None	80GB	Combo	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-57U	4x4	Pentium 4 541	3.20	1MB	Single	HT 512MB	None	160GB	DVD±RW	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-GKU	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB	None	80GB	CD	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-GLU	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB	None	80GB	Combo	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-J2U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	None	80GB	CD	GMA 950	XP Pro	1-yr	Aug 06
A52	8287-J3U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	None	80GB	Combo	GMA 950	XP Pro	1-yr	Aug 06

These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning	Quality, reliability, and manageability								<b>Tower</b>			
Processor	Intel® Pentium 4 Processor 524 or 541 with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit, 533MHz (524 only) or 800MHz system bus, and 1MB L2 cache or Intel Pentium D Processor 820 or 945 with dual-core, EM64T, EIST (9xx only), Execute Disable Bit, 800MHz system bus, and 2x1MB (8xx) or 2x2MB (9xx) L2 cache								<ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7"D X 17.0"H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapter cards</li> </ul>			
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket											
Memory - std/max <sup>a</sup>	512MB or 1GB std / 4GB max											
Memory	Four 240-pin DIMM sockets / model 2DU: two sockets used (512MB per socket); other models: one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable											
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display								Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", no access, std disk			
SATA disk	80 or 160GB / SATA300 7200 rpm / vibration dampening								Slot 1: 3/4-length, full-height, PCI Express x16 (75w max)		<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>	
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in ICH7								Slot 2: 3/4-length, full-height, PCI Express x1			
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar								Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v)			
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM								Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)			
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo											
EIDE DVD±RW	Some: DVD and CD burner / double-layer / Multi-Burner Bus (part 73P3370)											
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)											
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / 1 planar connector											
Diskette drive	None / use optional external USB-based diskette drive											
Chipset	Intel 945G Express Chipset / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O											
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)											
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software											
Speaker	One internal speaker for business audio											
IEEE 1394	None											
Ethernet	Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN®											
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black											
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black											
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs											

Preload with Windows XP Professional <sup>5</sup>	Accessories	
Microsoft® Windows® XP Professional	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
Preloaded (only some listed)	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
• Education model: VitalSource Library education software	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
• Education model: Adobe® Photoshop® Elements plus Adobe Premiere® Elements	256MB PC2-5300 CL5 NP DDR2 UDIMM	73P4982
• Rescue and Recovery™	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
• Client Security Solution™	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
• ThinkVantage Productivity Center	250GB Serial ATA300 Disk (7200 rpm)	41N3015
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW Drive	41N5581
• Diskeeper Lite	USB Fingerprint Reader	41U3167
• PC-Doctor™ (diagnostics)	USB 2.0 Lenovo Webcam	40Y8519
• Multimedia Center for Think Offerings (Combo, DVD±RW)	USB 2.0 Memory Key 1GB	40Y7421
• Sonic RecordNow and Drive Letter Access (Combo, DVD±RW)	USB 2.0 Super Multi-Burner Drive	40Y8638
• InterVideo WinDVD (Combo, DVD±RW)	Lenovo L192 Wide 19" Monitor (black)	6920AB1
• InterVideo WinDVD Creator (DVD±RW)	ThinkVision® L201p 20.1" Monitor (black)	9220HB1
<b>CD</b>	Kensington® MicroSaver® Desktop Lock	06P3839
• Education model: Adobe Photoshop Elements plus Adobe Premiere Elements	DVI-I PCIe Connection Adapter (ADD2)	73P2516
	NVIDIA® GeForce 6200 64MB Dual Head	73P2517
	ATI® RADEON® X300 SE 128MB Dual Head	41U4813
	ATI RADEON X700 128MB Dual Head	73P2518
	ATI X1600 Pro 256MB VGA/DVI-I/TV-out	41A4073
	Other options at lenovo.com/options	

ThinkCentre desktops implement ThinkVantage® technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

## LIMITED WARRANTY<sup>1</sup>

- ↔ 1-year parts and labor
- ↔ International Warranty Service<sup>9</sup>
- ↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)
- ↔ Onsite service upgrade options (in eligible locations):<sup>7</sup>
  - 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)
  - 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)
  - 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)
- ↔ Other ThinkPlus services at lenovo.com/thinkplus/warranty
- ↔ Post warranty maintenance services available
- ↔ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup>

See footnotes for important warranty information  
US models announced August 1, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Tower (8288) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Core	L2 cache	Bus Hyper-Thread	Diskette Memory <sup>®</sup>	SATA Drive	EIDE optical	Graphics	Int or ext speaker	Preload warranty <sup>1</sup>	Avail date
A52	8288-A1U	3x4	Celeron <sup>®</sup> 331	2.66	Single	256KB	533	256MB	None	40GB <sup>2</sup> CD	GMA 950	Internal	XP Home	1-yr Mar 06
A52	8288-A2U	3x4	Celeron 331	2.66	Single	256KB	533	256MB	None	40GB CD	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-ABU	3x4	Celeron 336	2.80	Single	256KB	533	256MB	None	40GB CD	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-ACU	3x4	Celeron 336	2.80	Single	256KB	533	512MB	None	80GB Combo	GMA 950	Internal	XP Home	1-yr Mar 06
A52	8288-21U	3x4	Pentium <sup>®</sup> 4 516	2.93	Single	1MB	533	256MB	None	40GB CD	GMA 950	Internal	XP Home	1-yr Mar 06
A52	8288-22U	3x4	Pentium 4 516	2.93	Single	1MB	533	512MB	None	40GB CD	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-27U	3x4	Pentium 4 519K3	3.06	Single	1MB	533	512MB	None	40GB CD	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-28U	3x4	Pentium 4 519K3	3.06	Single	1MB	533	512MB	None	80GB Combo	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-41U	3x4	Pentium 4 521	2.80	Single	1MB	800 HT	512MB	None	80GB Combo	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-42U	3x4	Pentium 4 521	2.80	Single	1MB	800 HT	512MB	None	80GB CD	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-49U	3x4	Pentium 4 521	2.80	Single	1MB	800 HT	512MB	None	160GB DVD±RW <sup>®</sup>	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-DAU	3x4	Pentium 4 630	3.00	Single	2MB	800 HT	512MB	None	80GB Combo	GMA 950	Internal	XP Pro	1-yr Mar 06
A52	8288-G1U	3x4	Pentium D 820	2.80	Dual	2x1MB	800	512MB	None	80GB Combo	GMA 950	Internal	XP Pro	1-yr May 06
A52	8288-G4U	3x4	Pentium D 820	2.80	Dual	2x1MB	800	512MB	None	80GB CD	GMA 950	Internal	XP Pro	1-yr May 06
A52	8288-G5U	3x4	Pentium D 820	2.80	Dual	2x1MB	800	512MB	None	160GB DVD±RW	GMA 950	Internal	XP Pro	1-yr May 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

<b>Positioning Processor</b> Mainstream enterprise stability and manageability <b>Intel® Celeron Processor 331</b> or <b>336</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus or <b>Intel Pentium 4 Processor 516, 519K, 521, or 630</b> with single core, EM64T, Hyper-Threading technology (521/6xx only), EIST (6xx only), Execute Disable Bit (except 516), and 533 or 800MHz system bus or <b>Intel® Pentium D Processor 820</b> with dual-core, EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache</b> <b>256KB, 1MB, or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9"W X 17.0" D X 15.7"H</li> <li>175mm W X 432mm D X 400mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> </ul>	
<b>L2 cache Implementation</b> Processor and L2 cache in FC-LGA4 in LGA775 socket	Memory - std/max <sup>2</sup> <b>256MB</b> or <b>512MB</b> std / 2GB max Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, opt diskette Bay ④ 3.5", 1" high, no access, std disk
<b>Graphics</b> <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display	<b>SATA disk</b> <b>40, 80, or 160GB</b> / SATA150 7200 rpm / vibration dampening <b>SATA controller</b> Serial ATA / 300MB/sec SATA300 / integrated in ICH7 <b>SATA cables</b> One SATA cable (one 1-drop to disk) / two SATA planar connectors <b>EIDE CD</b> Some: 48X-20X <sup>4</sup> CD-ROM <b>EIDE Combo</b> Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <b>EIDE DVD±RW</b> Some: DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370) <b>EIDE controller</b> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) <b>EIDE cables</b> One 2-drop EIDE 80-conductor cable to optical / one planar connector <b>Diskette drive</b> None / use optional external USB-based diskette drive	<b>Slot 1:</b> half-length, full-height, 32-bit PCI 2.3 <b>Slot 2:</b> half-length, full-height, 32-bit PCI 2.3 <b>Slot 3:</b> half-length, full-height, PCI Express x1
<b>Chipset</b> <b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech <sup>®</sup> IT8712F Super I/O	<b>SATA disk</b> <b>40, 80, or 160GB</b> / SATA150 7200 rpm / vibration dampening <b>SATA controller</b> Serial ATA / 300MB/sec SATA300 / integrated in ICH7 <b>SATA cables</b> One SATA cable (one 1-drop to disk) / two SATA planar connectors <b>EIDE CD</b> Some: 48X-20X <sup>4</sup> CD-ROM <b>EIDE Combo</b> Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <b>EIDE DVD±RW</b> Some: DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370) <b>EIDE controller</b> Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) <b>EIDE cables</b> One 2-drop EIDE 80-conductor cable to optical / one planar connector <b>Diskette drive</b> None / use optional external USB-based diskette drive	<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                     <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>
<b>Front ports</b> Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) <b>Rear ports</b> Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) <b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm) <b>Audio</b> Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX <sup>®</sup> software <b>Speaker</b> One internal speaker for business audio <b>IEEE 1394</b> None <b>Ethernet</b> 10/100 ethernet on planar / Broadcom <sup>®</sup> 4401 / PCI 2.3 / Wake on LAN <sup>®</sup>	<b>Keyboard</b> 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black <b>Mouse</b> Optical Wheel Mouse (USB only), 400 dpi, black <b>Power supply</b> 230 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	ThinkCentre desktops implement ThinkVantage <sup>®</sup> technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
<b>Preload with Windows XP Home<sup>5</sup></b> Microsoft® Windows® XP Home Edition <b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft Windows XP Professional <b>Preloaded</b> (all; only some listed) <ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Access Connections™</li> <li>ThinkVantage Productivity Center</li> <li>Client Security Solution™</li> <li>Symantec® Client Security™</li> <li>Multimedia Center for Think Offerings (combo, DVD±RW)</li> <li>Sonic RecordNow and Drive LetterAccess (combo, DVD±RW)</li> <li>InterVideo WinDVD (combo, DVD±RW)</li> <li>InterVideo WinDVD Creator (DVD±RW)</li> </ul>	<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 41U3167 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 40Y8638 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L192p 19" Monitor (black) 9419HC2 Enh Perf Wireless Keyboard and Mouse 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>

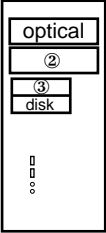
See footnotes for important warranty information  
 US models announced February 21 or May 30, 2006  
 US models withdrawn effective December 2006

# ThinkCentre® A52 Tower (8288) - TopSeller (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	Core	L2 cache	Bus Hyper-Thread	Memory*	Diskette Drive	Media Reader	SATA disk	EIDE optical	Graphics	Preload warranty <sup>1</sup>	Avail date
A52	8288-4BU	3x4	Pentium® 4 524	3.06	Single	1MB	533 HT	512MB	None		80GB	CD	GMA 950	XP Pro	1-yr Aug 06
A52	8288-4CU	3x4	Pentium 4 524	3.06	Single	1MB	533 HT	512MB	None	9-in-1	160GB	Combo	GMA 950	XP Home	1-yr Aug 06
A52	8288-4DU	3x4	Pentium 4 524	3.06	Single	1MB	533 HT	512MB	None		80GB	Combo	GMA 950	XP Pro	1-yr Aug 06
A52	8288-4EU	3x4	Pentium 4 524	3.06	Single	1MB	533 HT	512MB	None	9-in-1	160GB	DVD±RW <sup>6</sup>	GMA 950	XP Home	1-yr Aug 06
A52	8288-35U	3x4	Pentium 4 541	3.20	Single	1MB	800 HT	512MB	None		80GB	CD	GMA 950	XP Pro	1-yr Aug 06
A52	8288-36U	3x4	Pentium 4 541	3.20	Single	1MB	800 HT	512MB	None		80GB	Combo	GMA 950	XP Pro	1-yr Aug 06
A52	8288-37U	3x4	Pentium 4 541	3.20	Single	1MB	800 HT	512MB	None	9-in-1	160GB	DVD±RW	GMA 950	XP Home	1-yr Aug 06
A52	8288-94U	3x4	Pentium D 945	3.40	Dual	2x2MB	800	512MB	None		80GB	CD	GMA 950	XP Pro	1-yr Aug 06
A52	8288-95U	3x4	Pentium D 945	3.40	Dual	2x2MB	800	512MB	None		80GB	Combo	GMA 950	XP Pro	1-yr Aug 06
A52	8288-96U	3x4	Pentium D 945	3.40	Dual	2x2MB	800	512MB	None	9-in-1	160GB	DVD±RW	GMA 950	XP Home	1-yr Aug 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

<b>Positioning</b>	<i>Mainstream enterprise stability and manageability</i>	<b>Tower</b> • Business black color • 6.9"W X 17.0" D X 15.7"H • 175mm W X 432mm D X 400mm H • 22.0 lb (10.0 kg) • Handle on top front 
<b>Processor</b>	<b>Intel Pentium 4 Processor 524</b> or <b>541</b> with single core, EM64T, Hyper-Threading technology, Execute Disable Bit, 533MHz or 800MHz system bus, and 1MB L2 cache, or <b>Intel Pentium D Processor 945</b> with dual-core, EM64T, EIST, Execute Disable Bit, 800MHz system bus, and 2x2MB L2 cache Processor and L2 cache in FC-LGA4 in LGA775 socket	
<b>Implementation</b>		
<b>Memory - std/max*</b>	<b>512MB std / 2GB max</b>	
<b>Memory</b>	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	
<b>Graphics</b>	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt diskette or media reader Bay ④ 3.5", 1" high, no access, std disk
<b>SATA disk</b>	<b>80 or 160GB</b> / SATA300 7200 rpm / vibration dampening	Slot 1: half-length, full-height, 32-bit PCI 2.3 Slot 2: half-length, full-height, 32-bit PCI 2.3 Slot 3: half-length, full-height, PCI Express x1
<b>SATA controller</b>	Serial ATA / 300MB/sec SATA300 / integrated in ICH7	
<b>SATA cables</b>	One SATA cable (one 1-drop to disk) / two SATA planar connectors	
<b>EIDE CD</b>	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM	
<b>EIDE Combo</b>	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
<b>EIDE DVD±RW</b>	<i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)	
<b>EIDE controller</b>	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	
<b>EIDE cables</b>	One 2-drop EIDE 80-conductor cable to optical / one planar connector	
<b>Diskette drive</b>	None / use optional external USB-based diskette drive	
<b>Media reader</b>	<i>Some:</i> 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0	
<b>Chipset</b>	<b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O	
<b>Front ports</b>	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
<b>Rear ports</b>	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
<b>Rear audio ports</b>	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)	
<b>Audio</b>	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software	
<b>Speaker</b>	One internal speaker for business audio	
<b>IEEE 1394</b>	None	
<b>Ethernet</b>	10/100 ethernet on planar / Broadcom® 4401 / PCI 2.3 / Wake on LAN®	
<b>Keyboard</b>	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	<b>SECURITY</b> • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) - No keylock • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Disk, removable, and network device boot password • Diskette write protect • Front USB port disablement
<b>Mouse</b>	Optical Wheel Mouse (USB only), 400 dpi, black	
<b>Power supply</b>	230 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	

	<b>Accessories</b>	<b>LIMITED WARRANTY<sup>1</sup></b>
<b>Preload with Windows XP Home<sup>5</sup></b>	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970	<b>1-year parts and labor</b> <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b> <b>Post warranty maintenance services available</b> <sup>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> </sup>
Microsoft® Windows® XP Home Edition	512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971	
<b>Preload with Windows XP Professional<sup>5</sup></b>	1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972	
Microsoft® Windows® XP Professional	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973	
<b>Preloaded</b> (all; only some listed)	256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982	
• Rescue and Recovery™	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983	
• Client Security Solution™	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984	
• ThinkVantage Productivity Center	250GB Serial ATA300 Disk (7200 rpm) 41N3015	
• ThinkVantage System Update	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300	
• Symantec® Client Security™	Super Multi-Burner DL DVD±RW Drive 41N5581	
• Diskeeper Lite	USB Portable Diskette Drive 05K9276	
• PC-Doctor™ (diagnostics)	USB 2.0/Analog Headset by Sennheiser 40Y8518	
• Multimedia Center for Think Offerings (Combo, DVD±RW)	USB 2.0 Lenovo Webcam 40Y8519	
• Sonic RecordNow and Drive Letter Access (Combo, DVD±RW)	USB 2.0 Memory Key 1GB 40Y7421	
• InterVideo WinDVD (combo, DVD±RW)	USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637	
<b>License</b> - CD not included (all)	USB 2.0 Super Multi-Burner Drive 40Y8638	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock 06P3839 Optical 3-button ScrollPoint Mouse (black) 31P7405 Enh Perf Wireless Keyboard and Mouse 73P4067 USB Keyboard with UltraNav™ 31P8950 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

See footnotes for important warranty information  
US models announced August 1, 2006  
US models withdrawn effective December 2006

Name	Type	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Diskette Memory <sup>6</sup>	SATA Drive	EIDE disk	optical	Graphics	FireWire adapter	Ext spkrs	Preload	Limited warranty <sup>1</sup>	Avail date	
<b>A52</b>	8296-D3U	4x4	Pentium® 4	630	3.00	2MB	single	HT	512MB	None	80GB <sup>2</sup>	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-D4U	4x4	Pentium 4	630	3.00	2MB	single	HT	512MB	None	80GB	Combo	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-E6U	4x4	Pentium 4	640	3.20	2MB	single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-EAU	4x4	Pentium 4	640	3.20	2MB	single	HT	512MB	None	80GB	Combo	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-F1U	4x4	Pentium 4	650	3.40	2MB	single	HT	512MB	None	80GB	Combo	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-48U	4x4	Pentium 4	521	2.80	1MB	single	HT	512MB	None	80GB	Combo	GMA 950	None	None	XP Pro	3-yr	Jan 06
<b>A52</b>	8296-4AU	4x4	Pentium 4	521	2.80	1MB	single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

Positioning Processor	<i>Quality, reliability, and manageability</i> <b>Intel® Pentium 4 Processor 521, 630, 640, 650</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 800MHz system bus, and 1 or 2MB L2 cache									<b>Tower</b>			
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket									<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7"D X 17.0"H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>			
Memory - std/max <sup>9</sup>	<b>512MB std / 4GB max</b>									Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", no access, std disk			
Memory	Four 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable									Slot 1: 3/4-length, full-height, PCI Express x16 (75w max) Slot 2: 3/4-length, full-height, PCI Express x1 Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)			
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display												
SATA disk	<b>80GB</b> / SATA300 7200 rpm / rubber vibration dampening mounts												
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in ICH7												
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar												
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM												
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo												
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)												
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / 1 planar connector												
Diskette drive	None / use optional external USB-based diskette drive												
Chipset	<b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O									<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>			
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)												
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software												
External speakers	None												
Speaker	One internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN®												
Modem	None												
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black												
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black												
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs												

Preload with Windows XP Professional <sup>5</sup>	Accessories	
Microsoft® Windows® XP Professional - Disk-to-Disk Recovery	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
<b>Preloaded</b>	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
• Rescue and Recovery™	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
• Access Connections™	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
• Client Security Solution™	256MB PC2-5300 CL5 NP DDR2 UDIMM	73P4982
• ThinkVantage Productivity Center	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
• ThinkVantage System Update	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
• Symantec® Client Security™	250GB Serial ATA300 Disk (7200 rpm)	41N3015
• Diskeeper Lite	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk)	73P3300
• PC-Doctor™ (diagnostics)	Super Multi-Burner DL DVD±RW Drive	41N5581
• Adobe® Reader	USB Portable Diskette Drive	05K9276
• Multimedia Center for Think Offerings (combo models)	USB Fingerprint Reader	41U3167
• Sonic RecordNow and Drive LetterAccess (combo models)	USB 2.0/Analog Headset by Sennheiser	40Y8518
• InterVideo WinDVD (combo models)	USB 2.0 Memory Key 1GB	40Y7421
<b>Downloadable</b>	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637
• Software Delivery Assistant	USB 2.0 Super Multi-Burner Drive	40Y8638
• System Migration Assistant	Lenovo L192 Wide 19" Monitor (black)	6920AB1
• IBM Director Agent (not XP Home)	ThinkVision® L192p 19" Monitor (black)	9419HC2
<b>License</b> - CD not included	ThinkVision L201p 20.1" Monitor (black)	9220HB1
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	Kensington® MicroSaver® Desktop Lock	06P3839
	Enhanced Performance USB Keyboard	73P2620
	Preferred Pro USB Fingerprint Keyboard	73P4730
	USB Keyboard with UltraNav™	31P8950
	DVI-I PCIe Connection Adapter (ADD2)	73P2516
	NVIDIA® GeForce 6200 64MB Dual Head	73P2517
	ATI® RADEON® X300 SE 128MB Dual Head	41U4813
	ATI RADEON X700 128MB Dual Head	73P2518
	ATI X1600 Pro 256MB VGA/DVI-I/TV-out	41A4073
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

ThinkCentre desktops implement ThinkVantage® technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

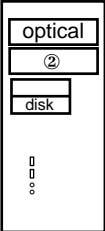
**LIMITED WARRANTY<sup>1</sup>**

- ⇒ **3 year parts and labor**
- ⇒ **International Warranty Service<sup>9</sup>**
- ⇒ **Customer Replaceable Unit (CRU) parts only with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ⇒ **Onsite service upgrade options (in eligible locations):<sup>7</sup>**
  - **3-year LOR 9x5, 4 hour response** (ThinkPlus™ part number 41C9192)
  - **3-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9193)
  - **4-year LOR 9x5, Next Business Day** (ThinkPlus part number 41C9194)
  - **4-year LOR 9x5, 4 hour response** (ThinkPlus part number 41C9195)
  - **4-year LOR 24x7, 4 hour response** (ThinkPlus part number 41C9196)
- ⇒ **Post-warranty maintenance services at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)**
- ⇒ **24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)**

# ThinkCentre® A52 Tower (8329) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Memory <sup>8</sup>	Diskette Drive	SATA disk	EIDE optical	EIDE Graphics	Mo-dem	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Avail date
A52	8329-46U	3x4	Pentium®4 521	2.80	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-49U	3x4	Pentium 4 524	3.06	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Aug 06
A52	8329-64U	3x4	Pentium 4 541	3.20	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Aug 06
A52	8329-D1U	3x4	Pentium 4 630	3.00	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-E1U	3x4	Pentium 4 640	3.20	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-F1U	3x4	Pentium 4 650	3.40	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-H1U	3x4	Pentium 4 661	3.60	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-G1U	3x4	Pentium D 820	2.80	2x1MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	May 06
A52	8329-82U	3x4	Pentium D 920	2.80	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-92U	3x4	Pentium D 930	3.00	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8329-J3U	3x4	Pentium D 945	3.40	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Aug 06

Positioning	Mainstream enterprise stability and manageability											<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 17.0" D X 15.7"H</li> <li>• 175mm W X 432mm D X 400mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> </ul> 					
Processor	Intel® Pentium 4 Processor 521, 524, 541, 630, 640, 650 or 661 with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 533MHz (524 only) or 800MHz system bus, and 1MB (5xx) or 2MB (6xx) L2 cache or Intel Pentium D Processor 820, 920, 930, or 945 with dual-core, EM64T, EIST (9xx only), Execute Disable Bit, 800MHz system bus, and 2x1MB (8xx) or 2x2MB (9xx) L2 cache																
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket																
Memory - std/max <sup>5</sup>	512MB std / 2GB max																
Memory	Two 240-pin DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable																
Graphics	Intel Graphics Media Accelerator 950 (GMA 950) / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display											Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, opt diskette Bay ④ 3.5", 1" high, no access, std disk					
SATA disk	80GB / SATA300 7200 rpm / vibration dampening											Slot 1: half-length, full-height, 32-bit PCI 2.3					
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in ICH7											Slot 2: half-length, full-height, 32-bit PCI 2.3					
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors											Slot 3: half-length, full-height, PCI Express x1					
EIDE CD	48X-20X <sup>4</sup> CD-ROM											<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>					
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)																
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one planar connector																
Diskette drive	None / use optional external USB-based diskette drive																
Chipset	Intel 945GZ Express Chipset / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O																
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)																
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX <sup>®</sup> software																
Speaker	None																
IEEE 1394	None																
Ethernet	10/100 ethernet on planar / Broadcom® 4401 / PCI 2.3 / Wake on LAN <sup>®</sup>																
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black											ThinkCentre desktops implement ThinkVantage <sup>®</sup> technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>					
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																
Power supply	230 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs																

Preload with Windows XP Professional <sup>5</sup>	Accessories	
Microsoft® Windows® XP Professional	256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
	2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
<b>Preloaded</b>	256MB PC2-5300 CL5 NP DDR2 UDIMM	73P4982
• Rescue and Recovery™	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
• Client Security Solution™	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
• ThinkVantage Productivity Center with Away Manager	160GB Serial ATA300 Disk (7200 rpm)	09N4254
• ThinkVantage System Update	250GB Serial ATA300 Disk (7200 rpm)	41N3015
• Symantec® Client Security™	Super Multi-Burner DL DVD±RW Drive	41N5581
• Diskeeper Lite	USB Portable Diskette Drive	05K9276
• PC-Doctor™ (diagnostics)	USB Fingerprint Reader	41U3167
• Adobe® Reader	USB 2.0/Analog Headset by Sennheiser	40Y8518
• Google Toolbar	USB 2.0 Memory Key 1GB	40Y7421
• Google Desktop	USB 2.0 Super Multi-Burner Drive	40Y8638
• Picasa from Google	USB 2.0 Portable 80GB Hard Disk	40Y8726
<b>License</b> - CD not included	Lenovo L192 Wide 19" Monitor (black)	6920AB1
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision® L171p 17" Monitor (black)	9417HC2
	ThinkVision L192p 19" Monitor (black)	9419HC2
	ThinkVision L201p 20.1" Monitor (black)	9220HB1
	Kensington® MicroSaver® Desktop Lock	06P3839
	Optical 3-button ScrollPoint Mouse (black)	31P7405
	Enh Perf Wireless Keyboard and Mouse	73P4067
	USB Keyboard with UltraNav™	31P8950
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	

See footnotes for important warranty information  
US models announced February 21, May 30, or August 1, 2006  
US models withdrawn effective December 2006

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(PK1-31) December 2006



# ThinkCentre® A52 Tower (8340) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Hyper-Thread	Core	Memory <sup>5</sup>	Diskette Drive	SATA disk	EIDE optical	Graphics	Mo-dem	Int or ext speaker	Preload warranty <sup>1</sup>	Avail date
A52	8340-41U	4x4	Pentium® 4 521	2.80	1MB	Single	HT	512MB	None	80GB <sup>2</sup>	CD	GMA 950	None	Internal	XP Pro	1-yr Feb 06
A52	8340-43U	4x4	Pentium 4 524	3.06	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Aug 06
A52	8340-65U	4x4	Pentium 4 541	3.20	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Aug 06
A52	8340-D1U	4x4	Pentium 4 630	3.00	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Jan 06
A52	8340-D2U	4x4	Pentium 4 630	3.00	2MB	Single	HT	512MB	None	160GB	DVD±RW <sup>6</sup>	X300 SE	Modem	Ext spks	XP Pro	1-yr Feb 06
A52	8340-E1U	4x4	Pentium 4 640	3.20	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Jan 06
A52	8340-E3U	4x4	Pentium 4 640	3.20	2MB	Single	HT	512MB	None	250GB	DVD±RW	X300 SE	Modem	Ext spks	XP Pro	1-yr Feb 06
A52	8340-F1U	4x4	Pentium 4 650	3.40	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Jan 06
A52	8340-G1U	4x4	Pentium D 820	2.80	2x1MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr May 06
A52	8340-H3U	4x4	Pentium D 945	3.40	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr Aug 06
Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Pentium 4 Processor 521, 524, 541, 630, 640, or 650</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 533MHz (524 only) or 800MHz system bus, and 1MB or 2MB L2 cache or  <b>Intel Pentium D Processor 820 or 945 with dual-core</b>, EM64T, EIST (9xx only) Execute Disable Bit, 800MHz system bus, and <b>2x1MB</b> (8xx) or <b>2x2MB</b> (9xx) L2 cache                      Processor and L2 cache in FC-LGA4 in LGA775 socket</p>											<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7"D X 17.0"H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>				
Implementation																
Memory - std/max <sup>5</sup>	<p><b>512MB std</b> / 4GB max                      Four 240-pin DIMM sockets / one socket used /  <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</p>											<p>Bay ① 5.25", HH 1.6", access, std optical                      Bay ② 5.25", HH 1.6" access, open                      Bay ③ 3.5", SL 1", access, open                      Bay ④ 3.5", SL 1", no access, std disk</p>				
Memory												<p>Slot 1: 3/4-length, full-height, PCI Express x16 (75w max)                      Slot 2: 3/4-length, full-height, PCI Express x1                      Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v)                      Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)</p>				
Graphics (one of following)	<ul style="list-style-type: none"> <li>• <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G / 400MHz / supports dual independent display</li> <li>• <b>ATI® RADEON® X300 SE</b> / PCI Express x16 adapter / <b>128MB</b> 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</li> </ul>															
SATA disk	<p><b>80, 160, or 250GB</b> / SATA300 7200 rpm / vibration dampening</p>															
SATA controller	<p>Serial ATA / 300MB/sec SATA300 / integrated in ICH7</p>															
SATA cables	<p>One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar</p>															
EIDE CD	<p><i>Some:</i> 48X-20X<sup>4</sup> CD-ROM</p>															
EIDE DVD±RW	<p><i>Some:</i> DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)</p>															
EIDE controller	<p>Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)</p>															
EIDE cables	<p>One 2-drop EIDE 80-conductor cable to optical / 1 planar connector</p>															
Diskette drive	<p>None / use optional external USB-based diskette drive</p>															
Chipset	<p><b>Intel 945G Express Chipset</b> / 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O</p>															
Front ports	<p>Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p>															
Rear ports	<p>Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>															
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>															
Audio	<p>Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software</p>															
External speakers	<p><i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo</p>															
Speaker	<p><i>Some:</i> [Internal] one internal speaker for business audio</p>															
IEEE 1394	<p>None</p>															
Ethernet	<p>Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN®</p>															
Modem	<p><i>Some:</i> 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter</p>															
Keyboard	<p>104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black</p>															
Mouse	<p>Optical Wheel Mouse (USB only), 400 dpi, black</p>															
Power supply	<p>310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs</p>															
<b>Preload with Windows XP Professional<sup>5</sup></b>	<p>Microsoft® Windows® XP Professional                      - Disk-to-Disk Recovery (in hidden protected area)</p>															
<b>Preloaded</b>	<p>• Rescue and Recovery™                      • Client Security Solution™                      • ThinkVantage Productivity Center with Away Manager                      • ThinkVantage System Update                      • Symantec® Client Security™                      • Diskeeper Lite                      • PC-Doctor™ (diagnostics)                      • Multimedia Center for Think Offerings (DVD±RW)                      • Sonic RecordNow and Drive LetterAccess (DVD±RW)                      • InterVideo WinDVD (DVD±RW)                      • InterVideo WinDVD Creator (DVD±RW)</p>															
<b>License - CD not included</b>	<p>- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client</p>															
<b>Accessories</b>	<p>256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970                      512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971                      1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972                      2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973                      256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982                      512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983                      1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984                      250GB Serial ATA300 Disk (7200 rpm) 41N3015                      48X/32X/48X/16X Max<sup>11</sup> Combo drive (blk) 73P3300                      Super Multi-Burner DL DVD±RW Drive 41N5581                      USB Portable Diskette Drive 05K9276                      USB Fingerprint Reader 41U3167                      USB 2.0 Memory Key 1GB 40Y7421                      USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637                      USB 2.0 Super Multi-Burner Drive 40Y8638                      Lenovo L192 Wide 19" Monitor (black) 6920AB1                      ThinkVision® L192p 19" Monitor (black) 9419HC2                      ThinkVision L201p 20.1" Monitor (black) 9220HB1                      DVI-I PCIe Connection Adapter (ADD2) 73P2516                      NVIDIA® GeForce 6200 64MB Dual Head 73P2517                      ATI® RADEON® X700 128MB Dual Head 73P2518                      ATI X1600 Pro 256MB VGA/DVI-I/TV-out 41A4073                      Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></p>															
<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No lockkey</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>																
<p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p>																
<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 1 year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>12</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>																

See footnotes for important warranty information  
 US models announced January 10, February 21, May 30, or August 1, 2006  
 US models withdrawn effective December 2006

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 (PK1-3) December 2006

# ThinkCentre® A52 Tower (8380) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Hyper-Thread	Memory <sup>5</sup>	Diskette Drive	SATA disk	EIDE optical Graphics	Mo-dem	Int or ext speaker	Pre-load	Limited warranty <sup>1</sup>	Avail date
<b>A52</b>	8380-44U	3x4	Pentium®4 521	2.80	1MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-4AU	3x4	Pentium 4 524	3.06	1MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Aug 06
<b>A52</b>	8380-J4U	3x4	Pentium 4 541	3.20	1MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Aug 06
<b>A52</b>	8380-D1U	3x4	Pentium 4 630	3.00	2MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-E4U	3x4	Pentium 4 640	3.20	2MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-F1U	3x4	Pentium 4 650	3.40	2MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-H2U	3x4	Pentium 4 661	3.60	2MB	Single	HT	512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-G5U	3x4	Pentium D 820	2.80	2x1MB	Dual		512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	May 06
<b>A52</b>	8380-85U	3x4	Pentium D 920	2.80	2x2MB	Dual		512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-91U	3x4	Pentium D 930	3.00	2x2MB	Dual		512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Mar 06
<b>A52</b>	8380-97U	3x4	Pentium D 945	3.40	2x2MB	Dual		512MB	None	80GB	CD GMA 950	None	Internal	XP Pro	3-yr	Aug 06

**Positioning**  
Processor  
**Processor**

**Mainstream enterprise stability and manageability**  
**Intel® Pentium 4 Processor 521, 524, 541, 630, 640, 650 or 661** with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 533MHz (524 only) or 800MHz system bus, and 1MB (5xx) or 2MB (6xx) L2 cache or **Intel Pentium D Processor 820, 920, 930 or 945** with **dual-core**, EM64T, EIST (9xx only), Execute Disable Bit, 800MHz system bus, and **2x1MB (8xx)** or **2x2MB (9xx)** L2 cache

**Implementation**  
Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket

**Memory - std/max<sup>5</sup>****512MB std / 2GB max**  
Memory  
Two 240-pin DIMM sockets / one socket used / **PC2-4200 533MHz DDR2** / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable

**Graphics**  
**Intel Graphics Media Accelerator 950 (GMA 950)** / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display

**SATA disk**  
SATA controller  
SATA cables  
EIDE CD  
EIDE controller  
EIDE cables  
Diskette drive

**80GB / SATA300 7200 rpm / vibration dampening**  
Serial ATA / 300MB/sec SATA300 / integrated in ICH7  
One SATA cable (one 1-drop to disk) / two SATA planar connectors  
48X-20X<sup>4</sup> CD-ROM  
Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)  
One 2-drop EIDE 80-conductor cable to optical / one planar connector  
None / use optional external USB-based diskette drive

**Chipset**  
**Intel 945GZ Express Chipset** / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O

**Front ports**  
Rear ports

Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)  
Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)

**Rear audio ports**  
Audio  
Speaker  
IEEE 1394  
Ethernet

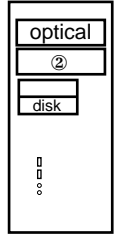
Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)  
Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software  
One internal speaker for business audio  
None  
10/100 ethernet on planar / Broadcom® 4401 / PCI 2.3 / Wake on LAN®

**Keyboard**  
Mouse  
Power supply

104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black  
Optional Wheel Mouse (USB only), 400 dpi, black  
230 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs

### Tower

- Business black color
- 6.9"W X 17.0" D X 15.7"H
- 175mm W X 432mm D X 400mm H
- 22.0 lb (10.0 kg)
- Handle on top front



Bay ① 5.25", 1.6" high, access, std optical  
Bay ② 5.25", 1.6" high, access, open  
Bay ③ 3.5", 1" high, access, opt diskette  
Bay ④ 3.5", 1" high, no access, std disk

Slot 1: half-length, full-height, 32-bit PCI 2.3  
Slot 2: half-length, full-height, 32-bit PCI 2.3  
Slot 3: half-length, full-height, PCI Express x1

### SECURITY

- One lock to secure both cover and entire system to fixed object:
  - Padlock loop (in rear for opt padlock)
  - Security slot (in rear for optional Kensington® Microsaver® cable)
  - No keylock
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
- Disk, removable, and network device boot password
- Diskette write protect
- Front USB port disablement

ThinkCentre desktops implement ThinkVantage® technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

Preload with Windows XP Professional <sup>5</sup>	Accessories
Microsoft® Windows® XP Professional	256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970
- Disk-to-Disk Recovery (in hidden protected area)	512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971
<b>Preloaded</b>	1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972
• Rescue and Recovery™	2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973
• Client Security Solution™	256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982
• ThinkVantage Productivity Center with Away Manager	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983
• ThinkVantage System Update	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984
• Symantec® Client Security™	160GB Serial ATA300 Disk (7200 rpm) 09N4254
• Diskeeper Lite	250GB Serial ATA300 Disk (7200 rpm) 41N3015
• PC-Doctor™ (diagnostics)	Super Multi-Burner DL DVD±RW Drive 41N5581
• Adobe® Reader	USB Fingerprint Reader 41U3167
• Google Toolbar	USB 2.0/Analog Headset by Sennheiser 40Y8518
• Google Desktop	USB 2.0 Lenovo Webcam 40Y8519
• Picasa from Google	USB 2.0 Memory Key 1GB 40Y7421
<b>License</b> - CD not included	USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	USB 2.0 Portable 80GB Hard Disk 40Y8726
	Lenovo L192 Wide 19" Monitor (black) 6920AB1
	ThinkVision® L192p 19" Monitor (black) 9419HC2
	ThinkVision L201p 20.1" Monitor (black) 9220HB1
	Optical 3-button ScrollPoint Mouse (black) 31P7405
	Enhanced Performance USB Keyboard 73P2620
	USB Keyboard with UltraNav™ 31P8950
	Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>

### LIMITED WARRANTY<sup>1</sup>

- ↪ **3-year parts and labor**
- ↪ **Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)**
- ↪ **Onsite service upgrade options (in eligible locations):<sup>7</sup>**
  - **3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)**
  - **3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)**
  - **4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)**
  - **4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)**
  - **4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)**
- ↪ **ThinkPlus services at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)**
- ↪ **24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup>**

See footnotes for important warranty information  
US models announced February 21, May 30, or August 1, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Tower (8381) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Memory <sup>6</sup>	Diskette Drive	SATA disk	EIDE optical	Graphics	FireWire adapter	Ext speakers	Preload	warranty <sup>1</sup>	Avail date
A52	8381-45U	4x4	Pentium® 4 521	2.80	1MB	Single	HT	512MB	None	80GB <sup>2</sup>	CD	GMA 950	None	None	XP Pro	3-yr	Feb 06
A52	8381-4AU	4x4	Pentium 4 524	3.06	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Aug 06
A52	8381-57U	4x4	Pentium 4 541	3.20	1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Aug 06
A52	8381-D1U	4x4	Pentium 4 630	3.00	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06
A52	8381-E1U	4x4	Pentium 4 640	3.20	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06
A52	8381-F1U	4x4	Pentium 4 650	3.40	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Jan 06
A52	8381-H2U	4x4	Pentium 4 661	3.60	2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Feb 06
A52	8381-G5U	4x4	Pentium D 820	2.80	2x1MB	Dual		512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	May 06
A52	8381-85U	4x4	Pentium D 920	2.80	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Feb 06
A52	8381-91U	4x4	Pentium D 930	3.00	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Feb 06
A52	8381-34U	4x4	Pentium D 945	3.40	2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	None	XP Pro	3-yr	Aug 06
Processor	<b>Intel® Pentium 4 Processor 521, 524, 541, 630, 640, 650, or 661</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 533MHz (524 only) or 800MHz bus, and 1MB or 2MB L2 cache or <b>Intel Pentium D Processor 820, 920, 930, or 945</b> with dual-core, EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache</b> (8xx) or <b>2x2MB L2 cache</b> (9xx) Processor in FC-LGA4 or FC-LGA6 in LGA775 socket									<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 7.0" W X 17.7" D X 17.0" H</li> <li>• 178mm W X 450mm D X 432mm H</li> <li>• 25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>• Handle on top front</li> <li>• Thumbscrew to remove bay 3 and 4</li> <li>• Toolless install and removal of disk, optical, diskette</li> <li>• Toolless install and removal of side cover</li> <li>• Toolless install and removal of adapter cards</li> </ul>							
Implementation										<ul style="list-style-type: none"> <li>• Bay ① 5.25", HH 1.6", access, std optical</li> <li>• Bay ② 5.25", HH 1.6", access, open</li> <li>• Bay ③ 3.5", SL 1", access, open</li> <li>• Bay ④ 3.5", SL 1", no access, std disk</li> </ul>							
Memory - std/max <sup>5</sup>	<b>512MB std / 4GB max</b> Four 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable									Slot 1: 3/4-length, full-height, PCI Express x16 (75w max) Slot 2: 3/4-length, full-height, PCI Express x1 Slot 3: 3/4-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: 3/4-length, full-height, 32-bit PCI 2.3 (5v)							
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945G GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / supports dual independent display									<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>							
SATA disk	<b>80GB</b> / SATA300 7200 rpm / rubber vibration dampening mounts Serial ATA / 300MB/sec SATA300 / integrated in ICH7																
SATA controller																	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar																
EIDE CD	48X-20X <sup>4</sup> CD-ROM																
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)																
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / 1 planar connector																
Diskette drive	None / use optional external USB-based diskette drive																
Chipset	<b>Intel 945G Express Chipset /</b> 82945G Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O																
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)																
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software																
External speakers	None																
Speaker	One internal speaker for business audio																
IEEE 1394	None																
Ethernet	Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1/ Wake on LAN®																
Modem	None																
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black																
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black																
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs																
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area)			<b>Accessories</b>						ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>								
<b>Preloaded</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center with Away Manager</li> <li>• ThinkVantage System Update</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Google Toolbar</li> <li>• Google Desktop</li> <li>• Picasa from Google</li> </ul>			256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 250GB Serial ATA300 Disk (7200 rpm) 41N3015 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Fingerprint Reader 41U3167 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 40Y8638 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock 06P3839 Enh Perf Wireless Keyboard and Mouse 73P4067 DVI-I PCIe Connection Adapter (ADD2) 73P2516 NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X300 SE 128MB Dual Head 41U4813 ATI X1600 Pro 256MB VGA/DVI-I/TV-out 41A4073 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>						<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3 year parts and labor</li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>								

See footnotes for important warranty information  
 US models announced January 10, February 21, May 30, or August 1, 2006  
 US models withdrawn effective December 2006

# ThinkCentre® A52 Small (8289) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Hyper-Thread	Diskette	SATA Drive	EIDE optical	Graphics	Modem adapter	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Avail date	
A52	8289-A1U	2x3	Celeron® 331	2.66	256KB	533		256MB	None	40GB <sup>2</sup>	CD	GMA 950	None	Internal	XP Home	1-yr	Mar 06
A52	8289-AEU	2x3	Celeron 336	2.80	256KB	533		256MB	None	40GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-21U	2x3	Pentium® 4 516	2.93	1MB	533		256MB	None	40GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-22U	2x3	Pentium 4 519K	3.06	1MB	533		256MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-44U	2x3	Pentium 4 521	2.80	1MB	800	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-4DU	2x3	Pentium 4 521	2.80	1MB	800	HT	512MB	None	80GB	Combo	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-D5U	2x3	Pentium 4 630	3.00	2MB	800	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-D9U	2x3	Pentium 4 630	3.00	2MB	800	HT	512MB	None	80GB	Combo	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-E4U	2x3	Pentium 4 640	3.20	2MB	800	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-EBU	2x3	Pentium 4 640	3.20	2MB	800	HT	512MB	None	80GB	Combo	GMA 950	None	Internal	XP Pro	1-yr	Mar 06
A52	8289-GDU	2x3	Pentium D 820	2.80	2x1MB	800	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	1-yr	May 06
A52	8289-GEU	2x3	Pentium D 820	2.80	2x1MB	800	HT	512MB	None	80GB	Combo	GMA 950	None	Internal	XP Pro	1-yr	May 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Celeron Processor 331 or 336</b> with single-core, EM64T, Execute Disable Bit, and 533MHz system bus or <b>Intel Pentium 4 Processor 516, 519K, 521, 630, or 640</b> with single core, EM64T, Hyper-Threading technology (521/6xx only), EIST (6xx only), Execute Disable Bit (except 516), and 533 or 800MHz (521/6xx only) bus or <b>Intel® Pentium D Processor 820</b> with dual-core, EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache 256KB, 1MB, or 2MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket	<b>Small</b>  Bay ① 3.5", slim .5", access, no std or opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only for digital video out [not dual independent display])
L2 cache Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	
Memory - std/max <sup>2</sup> Memory	<b>256 or 512MB std / 2GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No std floor stand (but supports vertical orientation)</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display	
SATA disk SATA controller SATA cables EIDE CD EIDE Combo EIDE controller EIDE cables Diskette drive	<b>40 or 80GB</b> / SATA150 7200 rpm / vibration dampening mounts Serial ATA / 300MB/sec SATA300 / integrated in ICH7 One SATA cable (one 1-drop to disk) / two SATA planar connectors <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 1-drop EIDE 80-conductor cable to optical / one connector None / use optional external USB-based diskette drive	<p align="center"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>
Chipset	<b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O	
Front ports Rear ports Rear audio ports Audio Speaker Ethernet Modem	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software One internal speaker for business audio Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN® None	<p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p>
Keyboard Mouse Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black 225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	
<b>Preload with Windows XP Home<sup>5</sup></b> Microsoft® Windows® XP Home Edition - Disk-to-Disk Recovery	<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 40Y8638 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock 06P3839 DVI-I PCIe Connection Adapter (ADD2) 73P2516 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	<p align="center"><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft Windows XP Professional - Disk-to-Disk Recovery	Preloaded (only some listed) • Rescue and Recovery™ • Access Connections™ • Client Security Solution™ • ThinkVantage Productivity Center with Away Manager • Symantec® Client Security™ • Diskkeeper Lite • Multimedia Center for Think Offerings (combo models) • Sonic RecordNow and Drive LetterAccess (combo models) • InterVideo WinDVD (combo models)	

See footnotes for important warranty information  
US models announced February 21 or May 30, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Small (8289) - TopSeller (August 2006) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Bus MHz	Memory <sup>®</sup>	Diskette Drive	SATA disk	EIDE optical	Graphics	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A52	8289-57U	2x3	Pentium® 4 524	3.06	1MB	533	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr	Educ	Aug 06
A52	8289-58U	2x3	Pentium 4 524	3.06	1MB	533	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr		Aug 06
A52	8289-59U	2x3	Pentium 4 524	3.06	1MB	533	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr		Aug 06
A52	8289-5CU	2x3	Pentium 4 541	3.20	1MB	800	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr		Aug 06
A52	8289-5EU	2x3	Pentium 4 541	3.20	1MB	800	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr		Aug 06

*These small and medium business (SMB) models are part of the US TopSeller™ Program*

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium 4 Processor 524 or 541</b> with single-core, EM64T, Hyper-Threading technology, Execute Disable Bit, and 533MHz or 800MHz system bus		<b>Small</b> 
L2 cache Implementation	<b>1MB</b> std and max / ECC / full speed Processor and L2 cache in FC-LGA4 in LGA775 socket		
Memory - std/max <sup>®</sup> Memory	<b>512MB std</b> / 2GB max Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		Bay ① 3.5", slim .5", access, no std or opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only for digital video out [not dual independent display])
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display		<ul style="list-style-type: none"><li>• Business black color; metal case</li><li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li><li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li><li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li><li>• Bays 1 and 2/3 flip up (latched and pivoting)</li><li>• Toolless cover flips up and tilts backward on rear hinges</li><li>• Toolless disk, diskette drive, optical drive removal</li><li>• Two slots on riser card (PCI and PCI Express x1)</li><li>• Toolless PCI slots and riser card retention</li><li>• Steel chassis supports 100 lb (45kg) monitor on top</li><li>• No std floor stand (but supports vertical orientation)</li></ul>
SATA disk SATA controller SATA cables EIDE CD EIDE Combo EIDE controller EIDE cables Diskette drive	<b>80GB</b> / SATA300 7200 rpm / vibration dampening mounts Serial ATA / 300MB/sec SATA300 / integrated in ICH7 One SATA cable (one 1-drop to disk) / two SATA planar connectors <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 1-drop EIDE 80-conductor cable to optical / one connector None / use optional external USB-based diskette drive		
Chipset	<b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O		<b>SECURITY</b>
Front ports Rear ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		<ul style="list-style-type: none"><li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li><li>• Power-on password</li><li>• Administrator password</li><li>• Boot sequence control</li><li>• Boot without keyboard, mouse, diskette</li><li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li><li>• Disk, removable, and network device boot password</li><li>• Diskette write protect</li><li>• Front USB port disablement</li></ul>
Rear audio ports Audio Speaker Ethernet Modem	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software One internal speaker for business audio Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN® None		
Keyboard Mouse Power supply	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black 225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Professional<sup>®</sup></b> Microsoft® Windows® XP Professional <b>Preloaded</b> (only some listed) • <i>Education model:</i> VitalSource Library education software • <i>Education model:</i> Adobe® Photoshop® Elements plus Adobe Premiere® Elements • Rescue and Recovery™ • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • ThinkVantage Fingerprint Software (fingerprint models) • Symantec® Client Security™ • Diskeeper Lite • PC-Doctor™ (diagnostics) • Google Toolbar • Google Desktop • Picasa from Google • Multimedia Center for Think Offerings (CD-RW, combo) • Sonic RecordNow and Drive Letter Access (CD-RW, combo) • InterVideo WinDVD (combo, DVD) <b>CD</b> • <i>Education model:</i> Adobe Photoshop Elements plus Adobe Premiere Elements <b>License</b> - CD not included (all) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 160GB Serial ATA300 Disk (7200 rpm) 09N4254 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 41U3167 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 Super Multi-Burner Drive 40Y8638 USB 2.0 Portable 80GB Hard Disk 40Y8726 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L151 15" Monitor (black) 9205AB6 ThinkVision L171p 17" Monitor (black) 9417HC2 ThinkVision L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 Kensington® MicroSaver® Desktop Lock ScrollPoint Pro Optical Mouse (black) 06P3839 Optical 3-button ScrollPoint Mouse (black) 31P8700 Enhanced Performance USB Keyboard 31P7405 Preferred Pro USB Fingerprint Keyboard 73P2620 USB Keyboard with UltraNav™ 73P4730 DVI-I PCIe Connection Adapter (ADD2) 31P8950 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a> 73P2516		
			ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
			<b>LIMITED WARRANTY<sup>1</sup></b>
			<ul style="list-style-type: none"><li>↪ 1-year parts and labor</li><li>↪ International Warranty Service<sup>9</sup></li><li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li><li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup><ul style="list-style-type: none"><li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li><li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li><li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li><li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li></ul></li><li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li><li>↪ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li><li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li></ul>

See footnotes for important warranty information  
US models announced August 1, 2006  
US models withdrawn effective December 2006

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(PK1-23) December 2006

# ThinkCentre® A52 Small (8341) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Slot x	Type-model	Processor	GHz	L2 cache	Core	Memory	Diskette Drive	SATA disk	EIDE optical	Graphics	Modem adapter	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Avail date
A52	8341-45U	2x3	Pentium® 4 521	2.80	1MB	Single	512MB	None	80GB <sup>2</sup>	CD	GMA 950	Internal	XP Pro	1-yr	Mar 06	
A52	8341-46U	2x3	Pentium 4 521	2.80	1MB	Single	512MB	None	80GB	Combo	GMA 950	Modem	Ext spks	XP Home	1-yr	Mar 06
A52	8341-48U	2x3	Pentium 4 524	3.06	1MB	Single	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Aug 06	
A52	8341-49U	2x3	Pentium 4 524	3.06	1MB	Single	512MB	None	80GB	Combo	GMA 950	Modem	Internal	XP Pro	1-yr	Aug 06
A52	8341-54U	2x3	Pentium 4 541	3.20	1MB	Single	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Aug 06	
A52	8341-55U	2x3	Pentium 4 541	3.20	1MB	Single	512MB	None	80GB	Combo	GMA 950	Modem	Internal	XP Pro	1-yr	Aug 06
A52	8341-D3U	2x3	Pentium 4 630	3.00	2MB	Single	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Mar 06	
A52	8341-D4U	2x3	Pentium 4 630	3.00	2MB	Single	512MB	None	80GB	Combo	GMA 950	Modem	Ext spks	XP Home	1-yr	Mar 06
A52	8341-D5U	2x3	Pentium 4 630	3.00	2MB	Single	512MB	None	160GB	DVD±RW <sup>6</sup>	GMA 950	Modem	Internal	XP Pro	1-yr	Mar 06
A52	8341-E4U	2x3	Pentium 4 640	3.20	2MB	Single	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Mar 06	
A52	8341-F3U	2x3	Pentium 4 650	3.40	2MB	Single	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Mar 06	
A52	8341-G1U	2x3	Pentium D 820	2.80	2x1MB	Dual	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	May 06	
A52	8341-G2U	2x3	Pentium D 820	2.80	2x1MB	Dual	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr	May 06	
A52	8341-H1U	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB	None	80GB	CD	GMA 950	Internal	XP Pro	1-yr	Aug 06	
A52	8341-H2U	2x3	Pentium D 945	3.40	2x2MB	Dual	512MB	None	80GB	Combo	GMA 950	Internal	XP Pro	1-yr	Aug 06	

Positioning	<b>Mainstream enterprise stability and manageability</b>	<p>Small</p> <p>Bay ① 3.5", slim .5", access, no std or opt diskette</p> <p>Bay ② 5.25", HH 1.6", access, std optical</p> <p>Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 *</p> <p>Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only for digital video out [not dual independent display])</p> <p>* modem in slot in some models</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1"D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No std floor stand (but supports vertical orientation)</li> </ul>
Processor	<b>Intel® Pentium 4 Processor 521, 524, 541, 630, 640, or 650</b> with single-core, EM64T, Hyper-Threading technology, EIST (6xx only), Execute Disable Bit, 533MHz or 800MHz system bus, and <b>1MB or 2MB L2 cache</b> or <b>Intel Pentium D Processor 820 or 945</b> with dual-core, EM64T, Execute Disable Bit, EIST (9xx only), 800MHz system bus, and <b>2x1MB or 2x2MB L2 cache</b>	
Implementation	Processor and L2 cache in FC-LGA4 in LGA775 socket	
Memory - std/max <sup>5</sup>	<b>512MB std / 2GB max</b>	
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	
Graphics	<b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display	
SATA disk	<b>80 or 160GB</b> / SATA300 7200 rpm / vibration dampening mounts	
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in ICH7	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors	
EIDE CD	<i>Some:</i> 48X-20X <sup>4</sup> CD-ROM	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Multi-Burner Plus (part 73P3370)	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	
EIDE cables	One 1-drop EIDE 80-conductor cable to optical / one connector	
Diskette drive	None / use optional external USB-based diskette drive	
Chipset	<b>Intel 945GZ Express Chipset /</b> 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O	
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software	
External speakers	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo	
Speaker	<i>Some:</i> [Internal] one internal speaker for business audio	
Ethernet	Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN®	
Modem	<i>Some:</i> 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter	
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black	
Power supply	225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	

**SECURITY**

- Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
- Disk, removable, and network device boot password
- Diskette write protect
- Front USB port disablement

ThinkCentre desktops implement ThinkVantage® technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

<p><b>Preload with Windows XP Home<sup>5</sup></b> Microsoft® Windows® XP Home Edition</p> <p><b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft Windows XP Professional</p> <p><b>Preloaded (only some listed)</b></p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Multimedia Center for Think Offerings (combo, DVD±RW)</li> <li>• Sonic RecordNow and Drive LetterAccess (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970</li> <li>512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971</li> <li>1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972</li> <li>2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973</li> <li>256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982</li> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>Super Multi-Burner DL DVD±RW Drive 41N5581</li> <li>USB Fingerprint Reader 41U3167</li> <li>USB 2.0 Memory Key 1GB 40Y7421</li> <li>USB 2.0 Super Multi-Burner Drive 40Y8638</li> <li>USB 2.0 Portable 80GB Hard Disk 40Y8726</li> <li>Lenovo L192 Wide 19" Monitor (black) 6920AB1</li> <li>ThinkVision® L201p 20.1" Monitor (black) 9220HB1</li> <li>USB Keyboard with UltraNav™ 31P8950</li> <li>DVI-I PCIe Connection Adapter (ADD2) 73P2516</li> <li>Other options at <a href="http://lenovo.com/options">lenovo.com/options</a></li> </ul>	<p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>1-year parts and labor</b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>⇒ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>
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See footnotes for important warranty information  
US models announced February 21, May 30, or August 1, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Small (8382) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Core	Hyper-Thread	Memory*	Diskette Drive	SATA disk	EIDE optical	Graphics	Modem adapter	Int or ext speaker	Preload	Limited warranty¹	Avail date
A52	8382-45U	2x3	Pentium® 4 521	2.80 1MB	Single	HT	512MB	None	80GB²	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-4AU	2x3	Pentium 4 524	3.06 1MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Aug 06
A52	8382-D3U	2x3	Pentium 4 630	3.00 2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-E3U	2x3	Pentium 4 640	3.20 2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-F5U	2x3	Pentium 4 650	3.40 2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-H2U	2x3	Pentium 4 661	3.60 2MB	Single	HT	512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-G5U	2x3	Pentium D 820	2.80 2x1MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	May 06
A52	8382-85U	2x3	Pentium D 920	2.80 2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-92U	2x3	Pentium D 930	3.00 2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Mar 06
A52	8382-96U	2x3	Pentium D 945	3.40 2x2MB	Dual		512MB	None	80GB	CD	GMA 950	None	Internal	XP Pro	3-yr	Aug 06

<b>Positioning</b> Processor Implementation Memory - std/max⁹ Memory Graphics SATA disk SATA controller SATA cables EIDE CD EIDE controller EIDE cables Diskette drive Chipset Front ports Rear ports Rear audio ports Audio Speaker Ethernet Modem Keyboard Mouse Power supply	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Pentium 4 Processor 521, 524, or 661</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 533 or 800MHz bus, and 1MB or 2MB L2 cache or <b>Intel Pentium D Processor 820, 920, 930, or 945</b> with dual-core, EM64T, EIST (9xx only), Execute Disable Bit, 800MHz system bus, and <b>2x1MB</b> L2 cache (8xx) or <b>2x2MB</b> L2 cache (9xx) Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable <b>Intel Graphics Media Accelerator 950 (GMA 950)</b> / integrated graphics in 945GZ GMCH / uses main memory (up to 128MB with 256MB+) / 400MHz / one 15-pin analog D-sub connector / 945GZ does not support dual independent display <b>80GB</b> / SATA300 7200 rpm / vibration dampening mounts Serial ATA / 300MB/sec SATA300 / integrated in ICH7 One SATA cable (one 1-drop to disk) / two SATA planar connectors 48X-20X⁴ CD-ROM Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 1-drop EIDE 80-conductor cable to optical / one connector None / use optional external USB-based diskette drive <b>Intel 945GZ Express Chipset</b> / 82945GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA300, ATA-100 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB (Version 2.0), two 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) Integrated digital audio / AC '97 interface / AD1888 codec / SoundMAX® software One internal speaker for business audio Gigabit ethernet on planar / Broadcom BCM5789 / PCIe x1 / Wake on LAN® None 104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black Optical Wheel Mouse (USB only), 400 dpi, black 225 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs	<b>Small</b>  Bay ① 3.5", slim .5", access, no std or opt diskette Bay ② 5.25", HH 1.6", access, std optical Bay ③ 3.5", SL 1", no access, std disk Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports optional DVI-I PCIe adptr only for digital video out [not dual independent display]) <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3"H (3.4"H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• No std floor stand (but supports vertical orientation)</li> </ul>
<b>Preload with Windows XP Professional⁵</b> - Microsoft® Windows® XP Professional - Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded</b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center with Away Manager</li> <li>• ThinkVantage System Update</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Google Toolbar</li> <li>• Google Desktop</li> <li>• Picasa from Google</li> </ul> <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	<b>Accessories</b> 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 160GB Serial ATA300 Disk (7200 rpm) 09N4254 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 41U3167 USB 2.0/Analog Headset by Sennheiser 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 Super Multi-Burner Drive 40Y8638 USB 2.0 Portable 80GB Hard Disk 40Y8726 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L192p 19" Monitor (black) 9419HC2 ThinkVision L201p 20.1" Monitor (black) 9220HB1 Optical 3-button ScrollPoint Mouse (black) 31P7405 Enhanced Performance USB Keyboard 73P2620 Preferred Pro USB Fingerprint Keyboard 73P4730 USB Keyboard with UltraNav™ 31P8950 DVI-I PCIe Connection Adapter (ADD2) 73P2516 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	<b>SECURITY</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul> ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a> <b>LIMITED WARRANTY¹</b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts³, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):⁷                         <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ 24x7¹⁴ toll-free support for warranty issues during the warranty period¹</li> </ul>

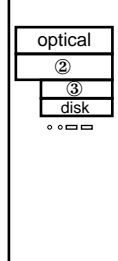
See footnotes for important warranty information  
US models announced February 21, May 30, or August 1, 2006  
US models withdrawn effective December 2006

# ThinkCentre® A52 Tower (8782) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Hyper-Core	Thread	Memory <sup>5</sup>	SATA disk	EIDE optical	FireWire	Modem	Int or ext speaker	Limited warranty <sup>1</sup>	Avail date	
A52	8782-3AU	4x4	Pentium® 4 521	2.8	1MB	single	HT	512MB	80GB <sup>2</sup>	CD	Integrated		Mod Ext spks XP Home	1-yr	Apr 06	
A52	8782-3BU	4x4	Pentium 4 521	2.8	1MB	single	HT	512MB	80GB	Combo	Integrated		Internal XP Pro	1-yr	Apr 06	
A52	8782-3CU	4x4	Pentium 4 521	2.8	1MB	single	HT	512MB	80GB	DVD±RW <sup>6</sup>	Integrated	Mod	Ext spks XP Home	1-yr	Apr 06	
A52	8782-D9U	4x4	Pentium 4 630	3.00	2MB	single	HT	512MB	80GB	CD	Integrated		Internal XP Pro	1-yr	Apr 06	
A52	8782-DAU	4x4	Pentium 4 630	3.00	2MB	single	HT	512MB	80GB	Combo	Integrated		Internal XP Pro	1-yr	Apr 06	
A52	8782-DBU	4x4	Pentium 4 630	3.00	2MB	single	HT	512MB	80GB	DVD±RW	Integrated	Mod	Ext spks XP Home	1-yr	Apr 06	
A52	8782-E7U	4x4	Pentium 4 640	3.20	2MB	single	HT	512MB	80GB	Combo	Integrated		Ext spks XP Pro	1-yr	Apr 06	
A52	8782-E8U	4x4	Pentium 4 640	3.20	2MB	single	HT	512MB	160GB	DVD±RW	X700	1394	Mod	Ext spks XP Home	1-yr	Apr 06
A52	8782-F2U	4x4	Pentium 4 650	3.40	2MB	single	HT	512MB	80GB	Combo	Integrated		Ext spks XP Pro	1-yr	Apr 06	
A52	8782-F3U	4x4	Pentium 4 650	3.40	2MB	single	HT	512MB	250GB	DVD±RW	X700	1394		Ext spks XP Pro	1-yr	Apr 06
A52	8782-H1U	4x4	Pentium 4 661	3.60	2MB	single	HT	512MB	250GB	DVD±RW	X700	1394		Ext spks XP Pro	1-yr	Apr 06
A52	8782-HCU	4x4	Pentium 4 661	3.60	2MB	single	HT	512MB	80GB	Combo	Integrated		Ext spks XP Pro	1-yr	Apr 06	
A52	8782-G2U	4x4	Pentium D 820	2.80	2x1MB dual			512MB	250GB	DVD±RW	X700	1394		Ext spks XP Pro	1-yr	Apr 06
A52	8782-82U	4x4	Pentium D 920	2.80	2x2MB dual			512MB	250GB	DVD±RW	X300 SE	1394		Ext spks XP Pro	1-yr	Apr 06
A52	8782-83U	4x4	Pentium D 920	2.80	2x2MB dual			512MB	40GB	CD	Integrated		Buzzer	XP Pro	1-yr	Apr 06
A52	8782-96U	4x4	Pentium D 930	3.00	2x2MB dual			512MB	250GB	DVD±RW	X700	1394		Ext spks XP Pro	1-yr	Apr 06

**These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	Quality, reliability, and manageability <b>Intel® Pentium 4 Processor 521, 630, 640, 650, 661</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 800MHz bus, and 1 or 2MB L2 cache or <b>Intel Pentium D Processor 820, 920, 930</b> with <b>dual-core</b> , EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache (8xx) or 2x2MB L2 cache (9xx)</b>	<b>Tower</b> <ul style="list-style-type: none"><li>Business black color</li><li>7.0" W X 17.7" D X 17.0" H</li><li>178mm W X 450mm D X 432mm H</li><li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li><li>Handle on top front</li><li>Thumbscrew to remove bay 3 and 4</li><li>Toolless install and removal of disk, optical, diskette</li><li>Toolless install and removal of side cover</li><li>Toolless install and removal of adapters</li><li>No standard system floor stand</li></ul>	
Implementation	Processor in FC-LGA4 or FC-LGA6 in LGA775 socket		
Memory - std/max <sup>5</sup>	<b>512MB std / 4GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>		
Graphics (one of following)	<ul style="list-style-type: none"><li><b>ATI® X300-based integrated graphics</b> in Xpress 200 chipset</li><li><b>ATI RADEON® X300 SE / PCI Express x16 adapter / 128MB 400MHz DDR1 / 400MHz RAMDAC / two 15-pin analog D-sub connectors / dual head support</b></li><li><b>ATI RADEON X700 / PCI Express x16 adapter / 128MB 600MHz DDR1 / 400MHz RAMDAC / three connectors: analog DB-15, digital DVI-I, S-Video out for TV-out / dual head support</b></li></ul>	Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, diskette (some mods) Bay ④ 3.5", SL 1", no access, std disk	
SATA disk	<b>40, 80, 160, or 250GB / SATA150 7200 rpm / vibration dampening</b> Serial ATA / 150 MB/sec SATA150 / integrated in south bridge	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
SATA controller	One SATA cable (one 1-drop to disk) / two SATA connectors on planar		
SATA cables	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE CD	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE Combo	Some: DVD and CD burner / double-layer / Multi-Burner Plus (part 73P3370)		
EIDE DVD±RW	Enhanced EIDE / ATA-133 / integrated in south bridge		
EIDE controller	One 2-drop EIDE 80-conductor cable to optical / one planar connector		
EIDE cables	Model 83U only: 3.5" 1.44MB diskette drive		
Diskette drive			
Chipset	<b>ATI Xpress 200 (RC410) chipset / RC410 graphics memory controller</b> in north bridge with PCI Express x16 support / ATI SB450 south bridge for SATA150, ATA-133 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O		
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec		
External speakers	Some: [Ext spks] external active speakers / Jazz Infinity / 2-piece / 3 watts / black		
Speaker	Some: [Internal] one internal speaker for business audio		
IEEE 1394	Some: FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, 4-pin port on front of system, no external cables included		
Ethernet	10/100 ethernet on systemboard / Realtek RTL8100C / PCI 2.3 / Wake on LAN®		
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter		
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black		
Mouse	Model 83U only: Wheel Mouse, 3-button, ball (6-pin PS/2 connector), black Some: Optical Wheel Mouse (USB only), 400 dpi, black		
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs		
<b>Preload with Windows XP Home<sup>5</sup></b>	Microsoft® Windows® XP Home Edition	<b>Accessories</b>	
		256MB PC2-4200 CL4 NP DDR2 UDIMM	73P4970
		512MB PC2-4200 CL4 NP DDR2 UDIMM	73P4971
<b>Preload with Windows XP Professional<sup>5</sup></b>	Microsoft Windows XP Professional	1GB PC2-4200 CL4 NP DDR2 UDIMM	73P4972
		2GB PC2-4200 CL4 NP DDR2 UDIMM	73P4973
		512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983
<b>Preloaded</b> (all; only some listed)		1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984
• Rescue and Recovery™		DVI-I PCIe Connection Adapter (ADD2)	73P2516
• Client Security Solution™		NVIDIA® GeForce 6200 64MB Dual Head	73P2517
• Symantec® Client Security™		ATI® RADEON® X300 SE 128MB Dual Head	40Y8405
• Multimedia Center for Think Offerings		ATI RADEON X700 128MB Dual Head	73P2518
• InterVideo WinDVD (combo, DVD±RW)		Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
• InterVideo WinDVD Creator (DVD±RW)			

SECURITY
<ul style="list-style-type: none"><li>One lock to secure both cover and entire system to fixed object:<ul style="list-style-type: none"><li>Padlock loop (in rear for opt padlock)</li><li>Security slot (in rear for optional Kensington® Microsaver® cable)</li></ul></li><li>No keylock</li><li>Power-on password</li><li>Administrator password</li><li>Boot sequence control</li><li>Boot without keyboard, mouse, diskette</li><li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li><li>Disk, removable, and network device boot password</li><li>Diskette write protect</li><li>Front USB port disablement</li></ul>

ThinkCentre desktops implement ThinkVantage™ technologies and design; visit [thinkcentre.com/thinkvantage](http://thinkcentre.com/thinkvantage)

LIMITED WARRANTY <sup>1</sup>
<ul style="list-style-type: none"><li>↔ <b>1-year parts and labor</b></li><li>↔ <b>International Warranty Service<sup>9</sup></b></li><li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>; 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li><li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b><ul style="list-style-type: none"><li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li><li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li></ul></li><li>↔ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li><li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li></ul>

See footnotes for important warranty information  
US models announced February 21, 2006  
US models withdrawn effective June 2006

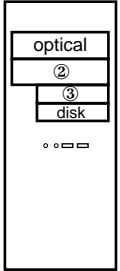


# ThinkCentre® A52 Tower (8785) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	GHz	Hyper-Core	Thread	Memory <sup>3</sup>	SATA disk	EIDE optical	FireWire Graphics	Modem adapter	Int or ext speaker	Pre-load	Limited warranty <sup>1</sup>	Avail date	
A52	8785-31U	4x4	Pentium 4 521	2.8	1MB	single	HT	512MB	80GB	Combo	Integrated	None	Modem	Ext	XP Home	1-yr	Apr 06

Positioning Processor	<i>Quality, reliability, and manageability</i>					<b>Tower</b>										
Implementation	Intel® Pentium 4 Processor 521 with single-core, EM64T, Hyper-Threading (HT) technology, Execute Disable Bit, 800MHz bus, and 1MB L2 cache					Processor in FC-LGA4 in LGA775 socket										
Memory - std/max <sup>5</sup>	<b>512MB std / 4GB max</b>					Two 240-pin DIMM sockets / one socket used /										
Memory	<b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>															
Graphics	<b>ATI® X300-based integrated graphics</b>					in Xpress 200 chipset										
SATA disk	<b>80GB / SATA300</b>					7200 rpm / vibration dampening										
SATA controller	Serial ATA / 150 MB/sec					SATA150 / integrated in south bridge										
SATA cables	One SATA cable (one 1-drop to disk) / two SATA connectors															
EIDE combo	48X/32X/48X/16X Max <sup>11</sup>					CD-RW/DVD-ROM Combo										
EIDE controller	Enhanced IDE / ATA-133 / integrated in south bridge															
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / one planar connect															
Diskette drive	None / use optional external USB-based diskette drive															
Chipset	<b>ATI Xpress 200 (RC410) chipset / RC410 graphics memory controller</b>					in north bridge with PCI Express x16 support / ATI SB450 south bridge for SATA150, ATA-133 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O										
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)															
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec															
External speakers	External active speakers / Jazz Infinity / 2-piece / 3 watts / black															
IEEE 1394	None															
Ethernet	10/100 ethernet on systemboard / Realtek RTL8100C / PCI 2.3 / Wake on LAN®															
Modem	56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter															
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black															
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black															
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs															
<b>Preload with Windows XP Home<sup>5</sup></b>			<b>Accessories</b>													
Microsoft® Windows® XP Home Edition			256MB PC2-4200 CL4 NP DDR2 UDIMM											73P4970		
- Disk-to-Disk Recovery (in hidden protected area)			512MB PC2-4200 CL4 NP DDR2 UDIMM											73P4971		
<b>Preloaded</b>			1GB PC2-4200 CL4 NP DDR2 UDIMM											73P4972		
• Rescue and Recovery™			2GB PC2-4200 CL4 NP DDR2 UDIMM											73P4973		
• Access Connections™			256MB PC2-5300 CL5 NP DDR2 UDIMM											73P4982		
• Client Security Solution™			512MB PC2-5300 CL5 NP DDR2 UDIMM											73P4983		
• ThinkVantage Productivity Center with Away Manager			1GB PC2-5300 CL5 NP DDR2 UDIMM											73P4984		
• ThinkVantage System Update			160GB Serial ATA300 Disk (7200 rpm)											09N4254		
• Symantec® Client Security™			250GB Serial ATA300 Disk (7200 rpm)											41N3015		
• Diskkeeper Lite			Super Multi-Burner DL DVD±RW											41N5581		
• PC-Doctor™ (diagnostics)			USB Portable Diskette Drive											05K9276		
• Adobe® Reader			USB Fingerprint Reader											73P4774		
• Google Toolbar			USB Gemplus GemPC Smart Card Reader											41N3040		
• Google Desktop			USB 2.0/Analog Headset by Sennheiser											40Y8518		
• Picasa from Google			USB 2.0 Lenovo Webcam											40Y8519		
• License - CD not included			USB 2.0 Memory Key 1GB											40Y7421		
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			USB 2.0 CD-RW/DVD-ROM Combo II Drive											40Y8637		
			USB 2.0 Super Multi-Burner Drive											40Y8638		
			ThinkVision® C170 17" (16.0" vis) (black)											6737P6N		
			ThinkVision C190 19" (18.0" vis) (black)											6739PON		
			ThinkVision L151p 15" Monitor (black)											9205HB2		
			ThinkVision L171p 17" Monitor (black)											9417HB2		
			ThinkVision L192p 19" Monitor (black)											9419HB2		
			ThinkVision L201p 20.1" Monitor (black)											9320HB1		
			Optical 3-button ScrollPoint Mouse (black)											31P7405		
			Enhanced Performance USB Keyboard											73P2620		
			Enh Perf Wireless Keyboard and Mouse											73P4067		
			Preferred Pro USB Fingerprint Keyboard											73P4730		
			DVI-I PCIe Connection Adapter (ADD2)											73P2516		
			NVIDIA® GeForce 6200 64MB Dual Head											73P2517		
			ATI® RADEON® X300 SE 128MB Dual Head											40Y8405		
			ATI RADEON X700 128MB Dual Head											73P2518		
			Other options at <a href="#">lenovo.com/options</a>													
<b>SECURITY</b>																
<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Disk, removable, and network device boot password</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>																
ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="#">thinkcentre.com/thinkvantage</a>																
<b>LIMITED WARRANTY<sup>1</sup></b>																
<ul style="list-style-type: none"> <li>⇒ <b>1-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>⇒ <b>Post-warranty maintenance services at <a href="#">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>																



Bay ① 5.25", HH 1.6", access, std optical  
 Bay ② 5.25", HH 1.6", access, open  
 Bay ③ 3.5", SL 1", access, open  
 Bay ④ 3.5", SL 1", no access, std disk  
 Slot 1: half-length, full-height, PCI Express x16 (75w max)  
 Slot 2: half-length, full-height, PCI Express x1  
 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)

See footnotes for important warranty information  
 US model announced February 21, 2006  
 US model withdrawn integrated June 2006

# ThinkCentre® A52 Tower (8788) - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Hyper-Thread	Memory*	SATA disk	EIDE optical	Graphics	Fire-Wire	Mo-dem	Int or ext speaker	Pre-load	Limited warranty <sup>1</sup>	Avail date
A52	8788-A1U	4x4	Celeron® D 331	2.66	256KB	single		512MB	80GB <sup>2</sup>	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-A2U	4x4	Celeron D 336	2.80	256KB	single		512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-31U	4x4	Pentium® 4 521	2.80	1MB	single	HT	512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-D1U	4x4	Pentium 4 630	3.00	2MB	single	HT	512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-E1U	4x4	Pentium 4 640	3.20	2MB	single	HT	512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-F1U	4x4	Pentium 4 650	3.40	2MB	single	HT	512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-H3U	4x4	Pentium 4 661	3.60	2MB	single	HT	512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-G1U	4x4	Pentium D 820	2.80	2x1MB	dual		512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-81U	4x4	Pentium D 920	2.80	2x2MB	dual		512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06
A52	8788-91U	4x4	Pentium D 930	3.00	2x2MB	dual		512MB	80GB	CD	Integrated	None	None	Internal	XP Pro	3-yr	Apr 06

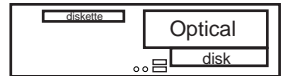
Positioning Processor	<i>Quality, reliability, and manageability</i> <b>Intel® Celeron D Processor 331 or 336</b> with single-core, EM64T, Execute Disable Bit, and 533MHz bus or <b>Intel Pentium 4 Processor 521, 630, 640, 650, 661</b> with single-core, EM64T, Hyper-Threading (HT) technology, EIST (6xx only), Execute Disable Bit, 800MHz bus, and 1 or 2MB L2 cache or <b>Intel Pentium D Processor 820, 920, 930</b> with dual-core, EM64T, Execute Disable Bit, 800MHz system bus, and <b>2x1MB L2 cache (8xx) or 2x2MB L2 cache (9xx)</b> Processor in FC-LGA4 or FC-LGA6 in LGA775 socket									<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>7.0" W X 17.7" D X 17.0" H</li> <li>178mm W X 450mm D X 432mm H</li> <li>25.0 to 27.5 lb (11.3 to 12.5 kg)</li> <li>Handle on top front</li> <li>Thumbscrew to remove bay 3 and 4</li> <li>Toolless install and removal of disk, optical, diskette</li> <li>Toolless install and removal of side cover</li> <li>Toolless install and removal of adapters</li> <li>No standard system floor stand</li> </ul>	
Implementation	Processor in FC-LGA4 or FC-LGA6 in LGA775 socket									Bay ① 5.25", HH 1.6", access, std optical Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, diskette (some mods) Bay ④ 3.5", SL 1", no access, std disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
Memory - std/max <sup>5</sup>	<b>512MB std / 4GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-400 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable									<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:           <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Disk, removable, and network device boot password</li> <li>Diskette write protect</li> <li>Front USB port disablement</li> </ul>	
Graphics	<b>ATI® X300-based integrated graphics</b> in Xpress 200 chipset									ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>	
SATA disk	<b>80GB / SATA300</b> 7200 rpm / vibration dampening SATA controller Serial ATA / 150 MB/sec SATA150 / integrated in south bridge SATA cables One SATA cable (one 1-drop to disk) / two SATA connectors EIDE CD 48X-20X <sup>4</sup> CD-ROM EIDE controller Enhanced IDE / ATA-133 / integrated in south bridge EIDE cables One 2-drop EIDE 80-conductor cable to optical / one planar connector Diskette drive None / use optional external USB-based diskette drive									<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>; 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</li> </ul>	
Chipset	<b>ATI Xpress 200 (RC410) chipset</b> / RC410 graphics memory controller in north bridge with PCI Express x16 support / ATI SB450 south bridge for SATA150, ATA-133 EIDE, PCI Express x1, PCI 2.3 bus, USB, Low Pin Count interface / ITE Tech® IT8712F Super I/O									Microsoft Windows XP Professional 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 - Disk-to-Disk Recovery (in hidden protected area) 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 73P4774 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 80GB Hard Disk 40Y8726 ThinkVision® C190 19" (18.0" vis) (black) 6739P0N ThinkVision L171p 17" Monitor (black) 9417HB2 ThinkVision L192p 19" Monitor (black) 9419HB2 ThinkVision L201p 20.1" Monitor (black) 9320HB1 Optical 3-button ScrollPoint Mouse (black) 31P7405 Enhanced Performance USB Keyboard 73P2620 DVI-I PCIe Connection Adapter (ADD2) 73P2516 NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X300 SE 128MB Dual Head 40Y8405 ATI RADEON X700 128MB Dual Head 73P2518 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>	
Front ports	Two USB (Version 2.0), microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)										
Audio	Integrated digital audio / AC '97 interface / Realtek ALC655 codec										
Speaker	One internal speaker for business audio										
IEEE 1394	None										
Ethernet	10/100 ethernet on systemboard / Realtek RTL8100C / PCI 2.3 / Wake on LAN										
Modem	None										
Keyboard	104-key Preferred Pro Full-size keyboard (6-pin PS/2 connector), black										
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black										
Power supply	310 watts with variable speed fan / universal / manual switch / 2 diagnostic LEDs										
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b> Microsoft Windows XP Professional 256MB PC2-4200 CL4 NP DDR2 UDIMM 73P4970 - Disk-to-Disk Recovery (in hidden protected area) 512MB PC2-4200 CL4 NP DDR2 UDIMM 73P4971 1GB PC2-4200 CL4 NP DDR2 UDIMM 73P4972 2GB PC2-4200 CL4 NP DDR2 UDIMM 73P4973 256MB PC2-5300 CL5 NP DDR2 UDIMM 73P4982 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Portable Diskette Drive 05K9276 USB Fingerprint Reader 73P4774 USB Gemplus GemPC Smart Card Reader 41N3040 USB 2.0 Memory Key 1GB 40Y7421 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 80GB Hard Disk 40Y8726 ThinkVision® C190 19" (18.0" vis) (black) 6739P0N ThinkVision L171p 17" Monitor (black) 9417HB2 ThinkVision L192p 19" Monitor (black) 9419HB2 ThinkVision L201p 20.1" Monitor (black) 9320HB1 Optical 3-button ScrollPoint Mouse (black) 31P7405 Enhanced Performance USB Keyboard 73P2620 DVI-I PCIe Connection Adapter (ADD2) 73P2516 NVIDIA® GeForce 6200 64MB Dual Head 73P2517 ATI® RADEON® X300 SE 128MB Dual Head 40Y8405 ATI RADEON X700 128MB Dual Head 73P2518 Other options at <a href="http://lenovo.com/options">lenovo.com/options</a>										
<b>Preloaded</b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Access Connections™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center with Away Manager</li> <li>ThinkVantage System Update</li> <li>Symantec® Client Security™</li> <li>Diskeeper Lite</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Google Toolbar</li> <li>Google Desktop</li> <li>Picasa from Google</li> </ul>										
<b>License</b> - CD not included	- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client										

See footnotes for important warranty information  
US models announced February 21, 2006  
US models withdrawn effective June 2006

**ThinkCentre® A55 Small (9636) - TopSeller (Vista®) - withdrawn**

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	Media reader	SATA disk	SATA optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Avail date
A55	9636-E1U	2x3	Celeron D 336	2.80	256KB	Single	1GB	None	80GB <sup>2</sup>	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	9636-F1U	2x3	Pentium 4 631	3.00	2MB	Single	1GB	None	80GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	9636-G1U	2x3	Pentium 4 641	3.20	2MB	Single	1GB	None	80GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	9636-H1U	2x3	Pentium D 925	3.00	2x2MB	Dual	1GB	None	80GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	9636-J1U	2x3	Pentium D 945	3.40	2x2MB	Dual	1GB	None	80GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	9636-Q9U	2x3	Pentium D 925	3.00	2x2MB	Dual	1GB	None	80GB	Combo	GMA	Business	Basic	1-yr	May07
A55	9636-Q7U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	80GB	DVD	GMA	Business	Basic	1-yr	May07
A55	9636-Q8U	2x3	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	160GB	Combo	GMA	Business	Basic	1-yr	May07
A55	9636-QVU	2x3	Celeron 420	1.60	512KB	Single	1GB	None	80GB	Combo	GMA	Business	Basic	1-yr	Jun 07
A55	9636-QJU	2x3	Pentium E2140	1.60	1MB	Dual	1GB	None	80GB	Combo	GMA	Business	Basic	1-yr	Jun 07
A55	9636-QMU	2x3	Pentium E2160	1.80	1MB	Dual	1GB	None	80GB	Combo	GMA	Business	Basic	1-yr	Jun 07
A55	9636-2AU	2x3	Core 2 Duo E4400	2.00	2MB	Dual	1GB	None	80GB	DVD	GMA	Business	Basic	1-yr	Jul 07

• **These small and medium business (SMB) models are part of the US TopSeller™ Program**

<b>Positioning Processor</b>	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Celeron® D Processor 336</b> with single-core, Intel 64 Tech, Execute Disable Bit, 533MHz system bus, and 256KB L2 cache or <b>Intel Celeron Processor 420</b> with single-core, Intel 64 Technology, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® 4 Processor 631</b> or <b>641</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium Dual-Core Processor E2140</b> or <b>E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> or <b>945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> or <b>E4400</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket</p>					<p><b>Small</b></p> <div data-bbox="1198 531 1477 606" style="border: 1px solid black; padding: 5px; width: fit-content;">  </div> <p>Bay ① 3.5", slim .5", access, opt diskette                  Bay ② 5.25", HH 1.6", access, std optical                  Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)                  Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>				
<b>Implementation</b>										
<b>Memory</b>	<p><b>1GB std / 4GB max<sup>9</sup></b> / two 240-pin DIMM sockets, non-parity, dual-channel capable;                  Feb/May 07 models: <b>PC2-4200 533MHz DDR2;</b>                  June/July 07 models: <b>PC2-5300 667MHz DDR2;</b>  <i>Italics:</i> standard memory in both sockets; no sockets available;  <i>Non-italics:</i> standard memory in one socket; one socket available</p>									
<b>Graphics</b>	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>					<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>				
<b>SATA disk</b>	<p><b>80GB</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening mounts</p>									
<b>SATA controller</b>	<p>Serial ATA / SATA 3.0Gb/s / integrated in ICH7</p>									
<b>SATA DVD</b>	<p>Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer</p>									
<b>SATA Combo</b>	<p>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</p>									
<b>SATA cables</b>	<p>Two SATA cables (each 1-drop to device) / 2 SATA connectors on planar</p>									
<b>Diskette drive</b>	<p>None</p>									
<b>Media reader</b>	<p>None</p>									
<b>Chipset</b>	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / SMSC® SHC5407 Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>					<p>Supports ThinkVantage® technologies</p>				
<b>Front ports</b>	<p>Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)</p>									
<b>Rear ports</b>	<p>Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>									
<b>Rear audio ports</b>	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)</p>									
<b>Audio</b>	<p>High Definition (HD) Audio / AD1986A codec / SoundMAX® software</p>									
<b>Speaker</b>	<p>One internal speaker for business audio</p>									
<b>Ethernet</b>	<p>Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®</p>									
<b>Modem</b>	<p>None</p>									
<b>Keyboard</b>	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo</p>									
<b>Mouse</b>	<p>Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo</p>									
<b>Power supply</b>	<p>220 watts with variable speed fan / manual switch / 2 diagnostic LEDs</p>									
<p><b>Preloaded operating system<sup>20</sup></b>                  - Microsoft® Windows® Vista Business Edition (32-bit)</p>			<p><b>Accessories</b></p>			<p>43R2001 43R2002 43R1990 41N5620 41N5565 41U5120 4434HE1 4438HB6 4433HB2 73P2516</p>				
<p><b>Preloaded applications<sup>5</sup></b> (only some listed)                  • Rescue and Recovery™                  • Client Security Solution™                  • Norton Internet Security™ (90 days of virus definitions)</p>			<p>1GB PC2-5300 DDR2 UDIMM (TopSeller)                  2GB PC2-5300 DDR2 UDIMM (TopSeller)                  500GB SATA 3.0Gb/s Disk (7200 rpm)                  Super Multi-Burner DL DVD±RW SATA Drive                  USB 2.0 Super Multi-Burner Drive                  USB 2.0 Security Memory Key 4GB                  ThinkVision® L197 Wide 19" LCD Monitor                  ThinkVision L200p Wide 20.1" LCD Monitor                  ThinkVision L220x Wide 22" LCD Monitor                  ADD2 DVI-I PCIe Connection Adapter                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			<p>↪ <b>1-year parts and labor</b>                  ↪ <b>International Warranty Service<sup>9</sup></b>                  ↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>                  ↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>                  • <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)                  • <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)                  • <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)                  • <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)                  • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)                  ↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>                  ↪ <b>Post warranty maintenance services available</b>                  ↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></p>				

See footnotes for important warranty information  
 US models announced January 30, May 1, June 5, or July 3, 2007  
 US models withdrawn effective August 2007 or June 2008

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Avail date
A55	9636-QHU	2x3	Celeron 420	1.60	512KB	Single	512MB	None	80GB <sup>2</sup>	DVD	GMA	XP Pro	1-yr	Jun 07
A55	9636-QKU	2x3	Pentium E2140	1.60	1MB	Dual	512MB	None	80GB	DVD	GMA	XP Pro	1-yr	Jun 07
A55	9636-QLU	2x3	Pentium E2160	1.80	1MB	Dual	512MB	None	80GB	DVD	GMA	XP Pro	1-yr	Jun 07
A55	9636-01U	2x3	Pentium E2140	1.60	1MB	Dual	1GB	None	80GB	Combo	GMA	XP Pro	1-yr	Jun 07
A55	9636-02U	2x3	Pentium E2160	1.80	1MB	Dual	1GB	None	80GB	Combo	GMA	XP Pro	1-yr	Jun 07
A55	9636-QAU	2x3	Pentium D 925	3.00	2x2MB	Dual	512MB	None	80GB	DVD	GMA	XP Pro	1-yr	May 07
A55	9636-2NU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	512MB	None	80GB	DVD	GMA	XP Pro	1-yr	Nov 07
A55	9636-2PU	2x3	Core 2 Duo E4500	2.20	2MB	Dual	1GB	None	160GB	DVD±RW	GMA	XP Pro	1-yr	Nov 07

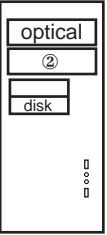
• **These These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning	Mainstream enterprise stability and manageability		<b>Small</b>	
Processor	<p><b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> or <b>E2160</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4500</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache</p>			
Implementation	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket		<p>Bay ① 3.5", slim .5", access, opt diskette                  Bay ② 5.25", HH 1.6", access, std optical                  Bay ③ 3.5", SL 1", no access, std disk</p> <p>Slot 1: half-length (175mm), full-height, 32-bit PCI 2.3 (5v)                  Slot 2: half-length (175mm), full-height, PCI Express x1 (x16 slot; supports opt DVI-I PCIe ADD2 adptr only)</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.2" W X 14.1" D X 3.3" H (3.4" H with feet)</li> <li>• 310mm W X 358mm D X 85mm H (87.5mm H with feet)</li> <li>• 18.7 to 20.0 lb (8.5 to 9.1 kg)</li> <li>• Bays 1 and 2/3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Two slots on riser card (PCI and PCI Express x1)</li> <li>• Toolless PCI slots and riser card retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>	
Memory	<p><b>512MB</b> or <b>1GB std</b> / 4GB max<sup>9</sup> / two 240-pin DIMM sockets, one socket used, non-parity, dual-channel capable;                  May 07 models: <b>PC2-4200 533MHz DDR2</b>;                  Other models: <b>PC2-5300 667MHz DDR2</b></p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington Microsaver cable)                      - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>	
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>		<p><b>Supports ThinkVantage® technologies</b></p>	
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening			
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7			
SATA DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer			
SATA Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo			
SATA DVD±RW	Some: DVD and CD burner, Super Multi-Burner DL			
SATA cables	Two SATA cables (each 1-drop to device) / 2 SATA connectors on planar			
Diskette drive	None			
Media reader	None			
Chipset	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / <b>SMSC® SHC5407</b> Super I/O for serial, parallel, diskette, hardware monitoring (temperature, voltage, fan speed)</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)			
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®			
Modem	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo			
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo			
Power supply	220 watts with variable speed fan / manual switch / 2 diagnostic LEDs			
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Microsoft® Windows® XP Professional</li> <li>↪ Disk-to-Disk Recovery (in hidden protected area)</li> </ul>		<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001</li> <li>2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618</li> <li>CD-RW/DVD-ROM Combo SATA 1.5Gb/s 41N5619</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>USB Portable Diskette Drive 05K9276</li> <li>ThinkVision® L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Preferred Pro USB Fingerprint Keyboard 73P4730</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	

See footnotes for important warranty information  
 US models announced May 1, June 5, or October 23, 2007  
 US models withdrawn effective June 2008

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	Media reader	SATA disk	EIDE optical	Graphics	Modem adapter	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Avail date
A55	8705-A4U	4x4	Celeron D 336	2.80	256KB	Single	256MB		80GB <sup>2</sup>	CD	GMA		Internal	XP Home	1-yr	Sep 06
A55	8705-A5U	4x4	Celeron D 336	2.80	256KB	Single	512MB		80GB	CD	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-21U	4x4	Pentium 4 524	3.06	1MB	Single	512MB		80GB	CD	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-22U	4x4	Pentium 4 524	3.06	1MB	Single	512MB	9-in-1	160GB	Combo	GMA	Modem	Ext spks	XP Home	1-yr	Sep 06
A55	8705-23U	4x4	Pentium 4 524	3.06	1MB	Single	512MB		80GB	Combo	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-24U	4x4	Pentium 4 524	3.06	1MB	Single	1GB		160GB	DVD±RW	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-31U	4x4	Pentium 4 541	3.20	1MB	Single	512MB		80GB	CD	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-33U	4x4	Pentium 4 541	3.20	1MB	Single	512MB		80GB	Combo	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-D4U	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB		80GB	CD	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-D5U	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB	9-in-1	160GB	Combo	GMA	Modem	Internal	XP Home	1-yr	Sep 06
A55	8705-D6U	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB		160GB	Combo	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-D7U	4x4	Pentium D 820	2.80	2x1MB	Dual	1GB		160GB	DVD±RW	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-DCU	4x4	Pentium D 820	2.80	2x1MB	Dual	512MB		80GB	Combo	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-P6U	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB		80GB	DVD, DVD	GMA		Internal	XP Pro	1-yr	May 07
A55	8705-FAU	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB	9-in-1	160GB	Combo	GMA	Modem	Ext spks	XP Home	1-yr	Oct 06
A55	8705-FBU	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB		160GB	Combo	GMA		Internal	XP Pro	1-yr	Oct 06
A55	8705-FCU	4x4	Pentium D 925	3.00	2x2MB	Dual	1GB		250GB	DVD±RW	GMA		Internal	XP Pro	1-yr	Oct 06
A55	8705-G4U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	9-in-1	160GB	Combo	GMA	Modem	Ext spks	XP Home	1-yr	Sep 06
A55	8705-G5U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB		160GB	Combo	GMA		Internal	XP Pro	1-yr	Sep 06
A55	8705-G6U	4x4	Pentium D 945	3.40	2x2MB	Dual	1GB		250GB	DVD±RW	GMA		Internal	XP Pro	1-yr	Sep 06

• These small and medium business (SMB) models are part of the US TopSeller™ Program

<b>Positioning</b> Processor	<b>Mainstream enterprise stability and manageability</b> <b>Intel® Celeron® D Processor 336</b> with single-core, Intel 64 Technology, Exec Dis Bit, 533MHz bus, and 256KB L2 cache or <b>Intel Pentium® 4 Processor 524</b> or <b>541</b> with single-core, Intel 64 Technology, Hyper-Threading technology, Execute Disable Bit, 533MHz (524) or 800MHz (541) system bus, and 1MB L2 cache or <b>Intel Pentium D Processor 820, 925, or 945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST (9xx only), 800MHz system bus, and 2x1MB or 2x2MB L2 cache								<b>Tower</b>							
<b>Implementation</b>	Processor and L2 cache in FC-LGA4/LGA6 in LGA775 socket								<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 16.7" D X 16.14" H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>							
<b>Memory - std/max<sup>a</sup></b> Memory	<b>256MB, 512MB, or 1GB std</b> / 4GB max Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHZ DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable								Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open (P6U = DVD) Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk							
<b>Graphics</b>	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display								Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)*							
<b>SATA disk</b> SATA controller SATA cables EIDE CD EIDE DVD EIDE Combo EIDE DVD±RW EIDE controller EIDE cables Diskette drive Media reader	<b>80, 160, or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA / SATA 3.0Gb/s / integrated in ICH7 One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar <i>Some:</i> 48X-20X <sup>4</sup> CD-ROM <i>Model P6U:</i> Two DVDs / 16X-48X Max <sup>4</sup> DVD-ROM, single-layer <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <i>Some:</i> DVD and CD burner / Super Multi-Burner DL (part 41N5581) Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7) One 1-drop EIDE cable to optical / 1 planar connector <i>None</i> <i>Some:</i> 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0								<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>							
<b>Chipset</b>	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O								<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>							
<b>Front ports</b> <b>Rear ports</b>	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												Supports ThinkVantage® technologies			
<b>Rear audio ports</b> Audio	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm) High Definition (HD) Audio / AD1986A codec / SoundMAX® software															
<b>External speakers</b> <b>Speaker</b> Ethernet Modem	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo <i>Some:</i> [Internal] one internal speaker for business audio Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN® <i>Some:</i> 56K <sup>10</sup> V.90 data/fax soft modem / PCI adapter															
<b>Keyboard</b>	<i>Some:</i> 104-key Preferred Pro Full-size keyboard (PS/2 connector), Lenovo logo <i>Model P6U:</i> Preferred Pro USB Keyboard (USB connector), 104-key, Lenovo logo															
<b>Mouse</b> <b>Power supply</b>	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo 280 watts with variable speed fan / manual switch															
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>														
- <i>Some:</i> Microsoft Windows® XP Home Edition		1GB PC2-5300 DDR2 UDIMM (TopSeller)		43R2001												
- <i>Some:</i> Microsoft Windows XP Professional		2GB PC2-5300 DDR2 UDIMM (TopSeller)		43R2002												
		500GB SATA 3.0Gb/s Disk (7200 rpm)		43R1990												
		USB Portable Diskette Drive		05K9276												
		USB 2.0 Security Memory Key 4GB		41U5120												
		ADD2 DVI-I PCIe Connection Adapter		73P2516												
<b>Preloaded applications<sup>5</sup></b> (all OSES; only some listed)		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>														
• InterVideo WinDVD (combo, DVD, DVD±RW)																

See footnotes for important warranty information  
US models announced September 26, 2006, October 17, 2006, or May 1, 2007  
US models withdrawn effective June 2007, August 2007, or June 2008

# ThinkCentre® A55 Tower (8705) - TopSeller (Nov 2006) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Graphics	Preload	Limited warranty <sup>1</sup>	Avail date
A55	8705-J3U	4x4	Core 2 Duo E6300	1.86	2MB	1GB	None	80GB <sup>2</sup>	Combo	GMA	XP Pro	1-yr	Nov 06
A55	8705-J4U	4x4	Core 2 Duo E6300	1.86	2MB	1GB	None	160GB	Combo	GMA	XP Home	1-yr	Nov 06
A55	8705-J5U	4x4	Core 2 Duo E6300	1.86	2MB	1GB	None	160GB	DVD±RW	GMA	XP Pro	1-yr	Nov 06
A55	8705-K1U	4x4	Core 2 Duo E6400	2.13	2MB	1GB	None	80GB	Combo	GMA	XP Pro	1-yr	Nov 06
A55	8705-K2U	4x4	Core 2 Duo E6400	2.13	2MB	1GB	None	160GB	DVD±RW	GMA	XP Pro	1-yr	Nov 06

• **These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning	<b>Mainstream enterprise stability and manageability</b>	
Processor	<b>Intel® Core™ 2 Duo Processor E6300 or E6400</b> with dual-core, Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, and 1066MHz system bus with <b>2MB</b> L2 cache (shared)	
Implementation	Processor in FC-LGA6 package in LGA775 socket	
Memory - std/max <sup>8</sup>	1GB std / 4GB max	
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display	
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening	
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7	
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar	
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE DVD±RW	Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)	
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)	
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)	
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software	
Speaker	one internal speaker for business audio	
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®	
Modem	None	
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs	

**Tower**

- Business black color
- 6.9" W X 16.7" D X 16.14" H
- 175mm W X 424mm D X 410mm H
- 22.0 lb (10.0 kg)
- Handle on top front
- Toolless cover removal
- Toolless disk, diskette drive, optical drive removal
- Toolless adapter retention

Bay ① 5.25", 1.6" high, access, standard optical  
 Bay ② 5.25", 1.6" high, access, open  
 Bay ③ 3.5", 1" high, access, optional diskette  
 Bay ④ 3.5", 1" high, no access, standard disk

Slot 1: half-length, full-height, PCI Express x16 (75w max)  
 Slot 2: half-length, full-height, PCI Express x1  
 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)  
 Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)

**Security**

- One lock to secure both cover and entire system to fixed object:
  - Padlock loop (in rear for opt padlock)
  - Security slot (in rear for optional Kensington® Microsaver® cable)
- Power-on password
- Administrator password
- Boot sequence control
- Boot without keyboard, mouse, diskette
- USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable
- Diskette write protect

<b>Preloaded operating system<sup>20</sup></b> - <i>Some:</i> Microsoft® Windows® XP Home Edition - <i>Some:</i> Microsoft Windows XP Professional ♦ Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b> 1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Essential Memory Key 4GB 45J7904 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L151 15" LCD Monitor 9165AC6 ThinkVision L171p 17" LCD Monitor 9417HC2 ThinkVision L174 17" LCD Monitor 9227AE1 ThinkVision L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L197 Wide 19" LCD Monitor 4434HE1 ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Preferred Pro USB Fingerprint Keyboard 73P4730 ADD2 DVI-I PCIe Connection Adapter 73P2516 Other accessories at <b>lenovo.com/accessories</b>	Supports ThinkVantage® technologies
<b>Preloaded applications<sup>5</sup></b> (all OSES; only some listed) • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Symantec® Client Security™ • Diskeeper® Lite • PC-Doctor™ (diagnostics) • Google Desktop • Picasa from Google • Earthlink Trial (Windows XP Home) • Multimedia Center for Think Offerings (combo, DVD±RW) • Sonic RecordNow and Drive Letter Access (combo, DVD±RW) • InterVideo WinDVD (combo, DVD±RW)		<b>Limited Warranty<sup>1</sup></b> ⇨ <b>1-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189) • <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187) • <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190) • <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188) • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191) ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

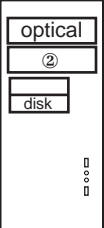
See footnotes for important warranty information  
 US models announced November 21, 2006  
 US models withdrawn effective June 2008

# ThinkCentre® A55 Tower (8705) - TopSeller (Aug 2007) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Graphics	Modem adapter	Int or ext speaker	Preload	Limited warranty <sup>1</sup>	Avail date
A55	8705-01U	4x4	Pentium E2140	1.60	1MB	Dual	512MB	None	160GB <sup>2</sup>	Combo	GMA	None	Internal	XP Pro	1-yr	Aug 07
A55	8705-02U	4x4	Pentium E2140	1.60	1MB	Dual	1GB	None	160GB	DVD±RW	GMA	None	Internal	XP Pro	1-yr	Aug 07
A55	8705-03U	4x4	Pentium E2140	1.60	1MB	Dual	2GB	None	80GB	Combo	GMA	None	Internal	XP Pro	1-yr	Feb 08

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning	<i>Mainstream enterprise stability and manageability</i>										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 16.7" D X 16.14" H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Processor	<b>Intel® Pentium® Dual-Core Processor E2140 with dual-core,</b> Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache Processor in FC-LGA6 package in LGA775 socket										
Implementation	<b>512MB, 1GB or 2GB std,</b> 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available										Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk
Memory	<b>Intel Graphics Media Accelerator 3000 (GMA 3000),</b> integrated graphics in 946GZ, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports optional ADD2 adapter but not dual independent display										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)
Graphics	<b>80GB or 160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH7 One SATA cable (one 1-drop to disk), 2 SATA connectors on planar <i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo <i>Some:</i> DVD and CD burner, Super Multi-Burner DL (41N5581) Enhanced IDE, ATA-100, integrated in I/O Controller Hub (ICH7) One 1-drop EIDE cable to optical, 1 planar connector										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>
SATA disk	<b>Intel 946GZ Express Chipset,</b> 82946GZ Graphics Memory Controller Hub (GMCH), 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O										
SATA controller	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)										
SATA cables	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										
EIDE Combo	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)										
EIDE DVD±RW	High Definition (HD) Audio, AD1986A codec, SoundMAX® software										
EIDE controller	one internal speaker for business audio										
EIDE cables	Gigabit ethernet on planar, Broadcom® BCM5786, PCIe x1, Wake on LAN®										
Diskette drive	None										
Media reader	None										
Chipset	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo										
Front ports	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo										
Rear ports	280 watts with variable speed fan, manual switch, 2 diagnostic LEDs										
Rear audio ports	<b>Preloaded operating system<sup>20</sup></b>										Supports ThinkVantage® technologies
Audio	<b>Accessories</b>										<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 1-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
Speaker	1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Essential Memory Key 4GB 45J7904 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L151 15" LCD Monitor 9165AC6 ThinkVision L171p 17" LCD Monitor 9417HC2 ThinkVision L174 17" LCD Monitor 9227AE1 ThinkVision L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L197 Wide 19" LCD Monitor 4434HE1 ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 ADD2 DVI-I PCIe Connection Adapter 73P2516 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										
Ethernet	<b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Symantec® Client Security™</li> <li>• Diskeeper® Lite</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Multimedia Center for Think Offerings (combo, DVD±RW)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• InterVideo WinDVD (combo, DVD±RW)</li> <li>• InterVideo WinDVD Creator (DVD±RW)</li> </ul>										
Modem	See footnotes for important warranty information US models announced August 14, 2007 or February 18, 2008 US models withdrawn effective June 2008										

See footnotes for important warranty information  
 US models announced August 14, 2007 or February 18, 2008  
 US models withdrawn effective June 2008

# ThinkCentre® A55 Tower (8705) - TopSeller (Vista®) - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>3</sup>	Media reader	SATA disk	EIDE optical	Graphics	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Avail date
A55	8705-AKU	4x4	Celeron D 336	2.80	256KB	Single	1GB	None	80GB <sup>2</sup>	DVD	GMA	Business	Basic	1-yr	Feb 07
A55	8705-35U	4x4	Pentium 4 541	3.20	1MB	Single	1GB	None	80GB	Combo	GMA	Business	Basic	1-yr	Feb 07
A55	8705-36U	4x4	Pentium 4 541	3.20	1MB	Single	1GB	None	80GB	DVD	GMA	Business	Basic	1-yr	Feb 07
A55	8705-DHU	4x4	Pentium 4 631	3.00	2MB	Single	1GB	None	80GB	DVD	GMA	Business	Premium	1-yr	Feb 07
A55	8705-DJU	4x4	Pentium 4 631	3.00	2MB	Single	1GB	None	160GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	8705-DKU	4x4	Pentium 4 641	3.20	2MB	Single	1GB	None	80GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	8705-DLU	4x4	Pentium 4 641	3.20	2MB	Single	1GB	None	160GB	DVD±RW	GMA	Business	Premium	1-yr	Feb 07
A55	8705-FGU	4x4	Pentium D 925	3.00	2x2MB	Dual	1GB	None	160GB	Combo	GMA	Business	Basic	1-yr	Feb 07
A55	8705-FHU	4x4	Pentium D 925	3.00	2x2MB	Dual	1GB	None	250GB	DVD±RW	GMA	Business	Basic	1-yr	Feb 07
A55	8705-M1U	4x4	Pentium D 915	2.80	2x2MB	Dual	1GB	None	80GB	DVD	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M2U	4x4	Pentium D 915	2.80	2x2MB	Dual	1GB	None	160GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M3U	4x4	Pentium D 915	2.80	2x2MB	Dual	1GB	None	160GB	DVD±RW	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M4U	4x4	Pentium D 935	3.20	2x2MB	Dual	1GB	None	80GB	DVD	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M5U	4x4	Pentium D 935	3.20	2x2MB	Dual	1GB	None	160GB	DVD±RW	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M7U	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	80GB	DVD	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M8U	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	160GB	Combo	GMA	Business	Premium	1-yr	Feb 07
A55	8705-M9U	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	160GB	DVD±RW	GMA	Business	Premium	1-yr	Feb 07
A55	8705-G8U	4x4	Pentium D 945	3.40	2x2MB	Dual	1GB	None	160GB	Combo	GMA	Business	Basic	1-yr	Feb 07
A55	8705-G9U	4x4	Pentium D 945	3.40	2x2MB	Dual	1GB	None	250GB	DVD±RW	GMA	Business	Basic	1-yr	Feb 07

• **These small and medium business (SMB) models are part of the US TopSeller™ Program**

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Celeron® D Processor 336</b> with single-core, Intel 64 Technology, Execute Disable Bit, 533MHz system bus, and 256KB L2 cache or  <b>Intel Pentium® 4 Processor 541</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 800MHz system bus, and 1MB L2 cache or  <b>Intel Pentium 4 Processor 631 or 641</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 800MHz system bus, and 2MB L2 cache or  <b>Intel Pentium D Processor 915, 925, 935, or 945</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or  <b>Intel Core™ 2 Duo Processor E4300</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB L2 cache (shared)</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 16.7" D X 16.14" H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Implementation	Processor in FC-LGA4/LGA6 package in LGA775 socket										<p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, optional diskette                  Bay ④ 3.5", 1" high, no access, standard disk                  Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>					
Memory - std/max <sup>5</sup>	<p>1GB std / 4GB max                  Two 240-pin DIMM sockets / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable /  <i>Some: (italics) standard memory in both sockets; no sockets available; Some: standard memory in 1 socket; 1 socket available</i></p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>					
Graphics	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display</p>										<p>Supports ThinkVantage® technologies</p>					
SATA disk	<p><b>80GB, 160GB, or 250GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening</p>										<p>Supports ThinkVantage® technologies</p>					
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7										<p>Supports ThinkVantage® technologies</p>					
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar										<p>Supports ThinkVantage® technologies</p>					
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE										<p>Supports ThinkVantage® technologies</p>					
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo										<p>Supports ThinkVantage® technologies</p>					
EIDE DVD±RW	<i>Some:</i> DVD and CD burner / Super Multi-Burner DL (part 41N5581)										<p>Supports ThinkVantage® technologies</p>					
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)										<p>Supports ThinkVantage® technologies</p>					
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector										<p>Supports ThinkVantage® technologies</p>					
Diskette drive	None										<p>Supports ThinkVantage® technologies</p>					
Media reader	None										<p>Supports ThinkVantage® technologies</p>					
Chipset	<p><b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O</p>										<p>Supports ThinkVantage® technologies</p>					
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)										<p>Supports ThinkVantage® technologies</p>					
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										<p>Supports ThinkVantage® technologies</p>					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)										<p>Supports ThinkVantage® technologies</p>					
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software										<p>Supports ThinkVantage® technologies</p>					
Speaker	one internal speaker for business audio										<p>Supports ThinkVantage® technologies</p>					
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®										<p>Supports ThinkVantage® technologies</p>					
Modem	None										<p>Supports ThinkVantage® technologies</p>					
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo										<p>Supports ThinkVantage® technologies</p>					
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo										<p>Supports ThinkVantage® technologies</p>					
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs										<p>Supports ThinkVantage® technologies</p>					
<b>Preloaded operating system<sup>20</sup></b>																
<p>- Microsoft® Windows® Vista Business Edition (32-bit)</p>																
<b>Accessories</b>																
<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>																

See footnotes for important warranty information

US models announced January 30, 2007

US models withdrawn effective March 2007, August 2007, or June 2008

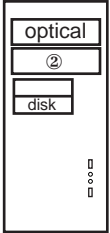


# ThinkCentre® A55 Tower (8705) - TopSeller (Home Basic) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory	Media reader	SATA disk	EIDE optical	Mod- Graphics	External speakers	Vista preload	Vista logo	Limited warranty	Avail date
A55	8705-DMU	4x4	Pentium 4 641	3.20	2MB	Single	1GB	9-in-1	250GB <sup>2</sup>	DVD±RW	GMA Yes	Spkrs	Home Basic	Basic	1-yr	Feb 07
A55	8705-FEU	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB	9-in-1	160GB	Combo	GMA Yes	Internal	Home Basic	Basic	1-yr	Feb 07
A55	8705-FFU	4x4	Pentium D 925	3.00	2x2MB	Dual	512MB	9-in-1	160GB	Combo	GMA Yes	Spkrs	Home Basic	Basic	1-yr	Feb 07
A55	8705-M6U	4x4	Pentium D 935	3.20	2x2MB	Dual	1GB	9-in-1	250GB	DVD±RW	GMA Yes	Spkrs	Home Basic	Basic	1-yr	Feb 07
A55	8705-G7U	4x4	Pentium D 945	3.40	2x2MB	Dual	512MB	9-in-1	160GB	Combo	GMA Yes	Spkrs	Home Basic	Basic	1-yr	Feb 07

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Pentium® 4 Processor 641</b> with single-core, Intel 64 Technology, Hyper-Threading (HT) technology, Execute Disable Bit, 800MHz system bus, and 2MB L2 cache or <b>Intel Pentium D Processor 925, 935, or 945</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache									<b>Tower</b>		
Implementation	Processor and L2 cache in FC-LGA66 in LGA775 socket									<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 16.7" D X 16.14" H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>		
Memory - std/max <sup>20</sup>	<b>512MB</b> or <b>1GB</b> std / 4GB max									Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)* * modem in slot in some models		
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable											
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display											
SATA disk	<b>160GB</b> or <b>250GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening											
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7											
SATA cables	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar											
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo											
EIDE DVD±RW	Some: DVD and CD burner / Super Multi-Burner DL (41N5581)											
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)											
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector											
Diskette drive	None											
Media reader	9-in-1 media reader / occupies diskette drive bay / internal USB 2.0											
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O									<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)											
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)											
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)											
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software											
External speakers	Some: [Spkrs] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo											
Speaker	Some: [Internal] one internal speaker for business audio											
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®											
Modem	56K <sup>10</sup> V.90 data/fax soft modem / PCI adapter											
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo											
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo											
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs									Supports ThinkVantage® technologies		
<b>Preloaded operating system<sup>20</sup></b>	<b>Microsoft® Windows® Vista® Home Basic Edition (32-bit)</b>			<b>Accessories</b> 1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 4GB 45J7904 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L171p 17" LCD Monitor 9417HC2 ThinkVision L174 17" LCD Monitor 9227AE1 ThinkVision L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L197 Wide 19" LCD Monitor 4434HE1 ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 ADD2 DVI-I PCIe Connection Adapter 73P2516						<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
 US models announced January 30, 2007  
 US models withdrawn effective March 2007 or June 2008

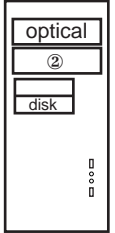
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 (ACIN11-1) June 2008

# ThinkCentre® A55 Tower (9265) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	L2 cache	Core	Memory	Media reader	SATA disk	EIDE optical	Graphics	Mod-em	Speaker	Preload	Limited warranty <sup>1</sup>	Avail date
A55	9265-KNU	4x4	Celeron 420	1.60 512KB	Single	512M	None	80GB <sup>2</sup>	DVD	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-KRU	4x4	Pentium E2140	1.60 1MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-04U	4x4	Pentium E2140	1.60 1MB	Dual	512M	None	160GB	Combo	GMA	No	Internal	XP Pro	3-yr	Aug 07
A55	9265-01U	4x4	Pentium E2140	1.60 1MB	Dual	1GB	None	80GB	Combo	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-02U	4x4	Pentium E2160	1.80 1MB	Dual	1GB	None	80GB	Combo	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-03U	4x4	Pentium E2160	1.80 1MB	Dual	1GB	None	160GB	DVD±RW	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-KSU	4x4	Pentium E2160	1.80 1MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	Jun 07
A55	9265-05U	4x4	Pentium E2160	1.80 1MB	Dual	2GB	None	160GB	DVD±RW	GMA	No	Internal	XP Pro	3-yr	Feb 08
A55	9265-K3U	4x4	Pentium D 925	3.00 2x2MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	May 07
A55	9265-K4U	4x4	Pentium D 925	3.00 2x2MB	Dual	512M	None	160GB	Combo	GMA	No	Internal	XP Pro	3-yr	May 07
A55	9265-JUU	4x4	Core 2 Duo E4300	1.80 2MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	May 07
A55	9265-LKU	4x4	Core 2 Duo E4400	2.00 2MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	Jul 07
A55	9265-LSU	4x4	Core 2 Duo E4500	2.20 2MB	Dual	512M	None	80GB	DVD	GMA	No	Internal	XP Pro	3-yr	Nov 07
A55	9265-LTU	4x4	Core 2 Duo E4500	2.20 2MB	Dual	1GB	None	160GB	DVD±RW	GMA	No	Internal	XP Pro	3-yr	Nov 07

• These small and medium business (SMB) models are part of the US TopSeller™ Program

<p><b>Positioning</b> Processor</p>	<p><i>Mainstream enterprise stability and manageability</i>  <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, and 800MHz bus with 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> or <b>E2160</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300, E4400, or E4500</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache                  Processor and L2 cache in FC-LGA6 in LGA775 socket</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 16.7" D X 16.14" H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
<p>Implementation</p>	<p>Processor and L2 cache in FC-LGA6 in LGA775 socket</p>	<p>Bay ① 5.25", 1.6" high, access, standard optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, optional diskette                  Bay ④ 3.5", 1" high, no access, standard diskette                  Slot 1: half-length, full-height, PCI Express x16 (75w max)                  Slot 2: half-length, full-height, PCI Express x1                  Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)                  Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p>
<p>Memory</p>	<p><b>512MB, 1GB, or 2GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; no sockets available;  <i>Non-italics:</i> standard memory in one socket; one socket available                  May 07 models: <b>PC2-4200 533MHz DDR2</b>;</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:</li> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>
<p>Graphics</p>	<p><b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b>, integrated graphics in 946GZ, uses main memory (up to 256MB), 400MHz, one 15-pin analog D-sub connector, supports optional ADD2 adapter but not dual independent display</p>	<p>Supports ThinkVantage® technologies</p>
<p>SATA disk SATA controller SATA cables EIDE DVD EIDE Combo EIDE DVD±RW EIDE controller EIDE cables Diskette drive Media reader</p>	<p><b>80GB or 160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening                  Serial ATA, SATA 3.0Gb/s, integrated in ICH7                  One SATA cable (one 1-drop to disk), 2 SATA connectors on planar  <i>Some:</i> 16X-48X Max<sup>4</sup> DVD-ROM, single-layer  <i>Some:</i> 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo  <i>Some:</i> DVD and CD burner, Super Multi-Burner DL (41N5581)                  Enhanced IDE, ATA-100, integrated in I/O Controller Hub (ICH7)                  One 1-drop EIDE cable to optical, 1 planar connector</p>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<p>Chipset</p>	<p><b>Intel 946GZ Express Chipset</b>, 82946GZ Graphics Memory Controller Hub (GMCH), 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O</p>	
<p>Front ports Rear ports</p>	<p>Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)                  Four SATA 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p>	
<p>Rear audio ports Audio External speakers Speaker Ethernet Modem</p>	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)                  High Definition (HD) Audio, AD1986A codec, SoundMAX® software                  None                  One internal speaker for business audio                  Gigabit ethernet on planar, Broadcom® BCM5786, PCIe x1, Wake on LAN®                  None</p>	
<p>Keyboard Mouse Power supply</p>	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo                  Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo                  280 watts with variable speed fan, manual switch, 2 diagnostic LEDs</p>	
<p><b>Preloaded operating system<sup>20</sup></b>                  - Microsoft® Windows® XP Professional                  ⇨ Disk-to-Disk Recovery (in hidden protected area)  <b>Preloaded applications<sup>5</sup></b> (only some listed)                  • Multimedia Center for Think Offerings (combo, DVD, DVD±RW)                  • Sonic RecordNow and Drive Letter Access (combo, DVD±RW)                  • InterVideo WinDVD (combo, DVD, DVD±RW)</p>	<p><b>Accessories</b>                  1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001                  2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002                  250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015                  500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                  Super Multi-Burner DL DVD±RW EIDE Drive 41N5581                  ThinkVision® L197 Wide 19" LCD Monitor 4434HE1                  ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6                  ThinkVision L220x Wide 22" LCD Monitor 4433HB2                  Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067                  ADD2 DVI-I PCIe Connection Adapter 73P2516                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	

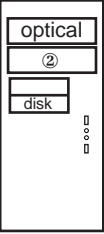
See footnotes for important warranty information

US models announced May 1, 2007, June 5, 2007, July 3, 2007, August 14, 2007, October 23, 2007, or February 18, 2008

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Name	Type-model	Slot x bay	Processor	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Mod-graphics	em-Speaker	Vista preload	Vista logo	Limited warranty <sup>1</sup>	Avail date	
A55	9265-KPU	4x4	Celeron 420	1.60	512KB	Sing	1GB	None	80GB <sup>2</sup>	Combo	GMA	No	Internal	Business 32	Basic 3-yr	Jun 07
A55	9265-KQU	4x4	Pentium E2140	1.60	1MB	Dual	1GB	None	80GB	Combo	GMA	No	Internal	Business 32	Basic 3-yr	Jun 07
A55	9265-KTU	4x4	Pentium E2160	1.80	1MB	Dual	1GB	None	80GB	Combo	GMA	No	Internal	Business 32	Basic 3-yr	Jun 07
A55	9265-KUU	4x4	Pentium E2160	1.80	1MB	Dual	1GB	None	160GB	DVD±RW	GMA	No	Internal	Business 32	Basic 3-yr	Jun 07
A55	9265-K2U	4x4	Pentium D 925	3.00	2x2MB	Dual	1GB	None	80GB	Combo	GMA	No	Internal	Business 32	Basic 3-yr	May 07
A55	9265-JVU	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	160GB	Combo	GMA	No	Internal	Business 32	Basic 3-yr	May 07
A55	9265-JWU	4x4	Core 2 Duo E4300	1.80	2MB	Dual	1GB	None	250GB	DVD±RW	GMA	No	Internal	Business 32	Basic 3-yr	May 07
A55	9265-LLU	4x4	Core 2 Duo E4400	2.00	2MB	Dual	1GB	None	160GB	Combo	GMA	No	Internal	Business 32	Basic 3-yr	Jul 07
A55	9265-LCU	4x4	Core 2 Duo E6420	2.13	4MB	Dual	1GB	None	160GB	DVD±RW	GMA	No	Internal	Business 32	Basic 3-yr	Jul 07

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>Intel® Celeron® Processor 420</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2140</b> or <b>E2160</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Pentium D Processor 925</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2x2MB L2 cache or <b>Intel Core™ 2 Duo Processor E4300</b> or <b>E4400</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E6420</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, Virtualization Tech, 1067MHz system bus, and 4MB shared L2 cache Processor and L2 cache in FC-LGA6 in LGA775 socket		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 16.7" D X 16.14" H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>				
Implementation			Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)				
Memory	<b>1GB std / 4GB max<sup>8</sup></b> / two 240-pin DIMM sockets, one socket used, non-parity, dual-channel capable; <b>May 07 models:</b> <b>PC2-4200 533MHz DDR2;</b> <b>June and July 07 models:</b> <b>PC2-5300 667MHz DDR2</b>						
Graphics	<b>Intel Graphics Media Accelerator 3000 (GMA 3000)</b> / integrated graphics in 946GZ / uses main memory (up to 256MB) / 400MHz / one 15-pin analog D-sub connector / supports optional ADD2 adapter but not dual independent display					<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                     <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>	
SATA disk	<b>80GB, 160GB, or 250GB</b> / SATA 3.0Gb/s 7200 rpm / vibration dampening						
SATA controller	Serial ATA / SATA 3.0Gb/s / integrated in ICH7						
EIDE Combo	One SATA cable (one 1-drop to disk) / 2 SATA connectors on planar <i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</i>						
EIDE DVD±RW	<i>Some: DVD and CD burner / Super Multi-Burner DL (41N5581)</i>						
EIDE controller	Enhanced IDE / ATA-100 / integrated in I/O Controller Hub (ICH7)						
EIDE cables	One 1-drop EIDE cable to optical / 1 planar connector						
Diskette drive	None						
Media reader	None						
Chipset	<b>Intel 946GZ Express Chipset</b> / 82946GZ Graphics Memory Controller Hub (GMCH) / 82801GB I/O Controller Hub (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O						
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)						
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)					Supports ThinkVantage® technologies	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm)						
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software						
External speakers	None					<b>Limited Warranty<sup>1</sup></b> ⇒ 3-year parts and labor ⇒ International Warranty Service <sup>9</sup> ⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇒ Onsite service upgrade options (in eligible locations): <sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> ⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇒ Post warranty maintenance services available ⇒ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378	
Speaker	One internal speaker for business audio						
Ethernet	Gigabit ethernet on planar / Broadcom® BCM5786 / PCIe x1 / Wake on LAN®						
Modem	None						
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo						
Mouse	Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo						
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs						
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® Vista Business Edition (32-bit)		<b>Accessories</b>				
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Lenovo Multimedia Center</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> </ul>		<ul style="list-style-type: none"> <li>1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001</li> <li>2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>Super Multi-Burner DL DVD±RW EIDE Drive 41N5581</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>ThinkVision® L193p 19" LCD Monitor 4431HB2</li> <li>ThinkVision L197 Wide 19" LCD Monitor 4434HE1</li> <li>ThinkVision L200p Wide 20.1" LCD Monitor 4438HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>ADD2 DVI-I PCIe Connection Adapter 73P2516</li> </ul> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				

See footnotes for important warranty information  
 US models announced May 1, June 5, or July 3, 2007  
 US models withdrawn effective June 2008

**Partial list of accessories supported on ThinkCentre A55 originally announced on September 26, 2006**

**Memory**

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	<i>ann 06/28/05</i>
1GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2001	<i>ann 03/25/08</i>
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	<i>ann 06/28/05</i>
2GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2002	<i>ann 03/25/08</i>
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	<i>ann 09/26/06</i>

*Intel 946GZ does not support PC2-6400 DDR2 memory*

**Optical**

16X Max <sup>4</sup> DVD-ROM (black)	22P6950	
Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	<i>ann 05/30/06</i>

**Storage and removable storage**

80GB SATA 3.0Gb/s Disk (7200 rpm)	09N4253	<i>ann 05/19/03</i>
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	<i>ann 05/19/03</i>
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	<i>ann 01/24/06</i>
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	<i>ann 11/06/07</i>

USB Portable Diskette Drive	05K9276	<i>ann 06/05/00</i>
USB 2.0 Essential Memory Key 1GB	41U4940	<i>ann 01/23/07</i>
USB 2.0 Essential Memory Key 2GB	41U4944	<i>ann 01/23/07</i>
USB 2.0 Essential Memory Key 4GB	45J7904	<i>ann 06/24/08</i>
USB 2.0 Security Memory Key 1GB	41U5118	<i>ann 07/17/07</i>
USB 2.0 Security Memory Key 2GB	41U5119	<i>ann 07/17/07</i>
USB 2.0 Security Memory Key 4GB	41U5120	<i>ann 07/17/07</i>
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	<i>ann 01/05/06</i>
USB 2.0 Portable 80GB Hard Disk	41N8378	<i>ann 04/17/07</i>
USB 2.0 Portable 120GB Hard Disk	41N8379	<i>ann 04/17/07</i>
USB 2.0 Super Multi-Burner Drive	41N5565	<i>ann 01/23/07</i>

**Graphics**

*Small 9636 supports:*

ADD2 DVI-I PCIe Connection Adapter <sup>40</sup>	73P2516	<i>ann 06/28/05</i>
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<sup>40</sup> No dual independent display with Intel 946GZ

*Tower 8705/9265 support 75 watts max:*

ADD2 DVI-I PCIe Connection Adapter <sup>40</sup>	73P2516	<i>ann 06/28/05</i>
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<sup>40</sup> No dual independent display with Intel 946GZ

**Keyboard**

Preferred Pro USB Keyboard	73P5220	<i>ann 06/21/05</i>
Preferred Pro Full Size PS/2 Keyboard	31P7415	<i>ann 06/04/02</i>
Enhanced Performance USB Keyboard	73P2620	<i>ann 03/23/04</i>
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	<i>ann 12/07/04</i>

**Mouse**

Optical Wheel Mouse (USB)	06P4069	<i>ann 05/21/03</i>
Optical ScrollPoint® Mouse (USB, PS/2)	31P7405	<i>ann 08/27/02</i>
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	<i>ann 01/23/07</i>

**Multimedia**

USB 2.0 Lenovo Multimedia Headset	40Y8518	<i>ann 06/27/06</i>
USB 2.0 Lenovo Webcam	40Y8519	<i>ann 08/29/06</i>

**Security**

Kensington® Cable Lock from Lenovo	73P2582	<i>ann 12/29/03</i>
USB Gemplus GemPC Smart Card Reader	41N3040	<i>ann 02/21/06</i>

**Monitors**

Lenovo E75 17" CRT Monitor (16.0" vis) blk	6307BTN	<i>ann 01/16/07</i>
ThinkVision® L151 15" LCD Monitor	9165AC6	<i>ann 10/23/07</i>
ThinkVision L171p 17" LCD Monitor	9417HC2	<i>ann 10/31/06</i>
ThinkVision L174 17" LCD Monitor	9227AE1	<i>ann 04/15/08</i>
ThinkVision L190x 19" LCD Monitor	4439HB2	<i>ann 10/23/07</i>
ThinkVision L193p 19" LCD Monitor	4431HB2	<i>ann 10/23/07</i>
ThinkVision L197 Wide 19" LCD Monitor	4434HE1	<i>ann 04/15/08</i>
ThinkVision L200p Wide 20.1" LCD Monitor	4438HB6	<i>ann 04/15/08</i>
ThinkVision L220x Wide 22" LCD Monitor	4433HB2	<i>ann 10/23/07</i>

**Monitor Accessories<sup>46</sup>**

ThinkVision USB Soundbar 40Y7616	<i>ann 08/23/05</i>
Kensington Cable Lock from Lenovo	73P2582 <i>ann 12/29/03</i>
Radial Arm	19K4464 <i>ann 05/05/00</i>

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

**Medialess License Key (MLK)**

Microsoft® Office 2007 Basic, English	43R1528	<i>ann 01/31/07</i>
Microsoft Office 2007 Small Business, Engl	43R1534	<i>ann 01/31/07</i>
Microsoft Office 2007 Professional, English	43R1531	<i>ann 01/31/07</i>

Other accessories at [lenovo.com/accessories](http://lenovo.com/accessories)

Accessories Guide pdf at [lenovo.com/accessoriesguide](http://lenovo.com/accessoriesguide)

Need to buy accessories no longer marketed by Lenovo? See [www.itxchange.com/lenovo](http://www.itxchange.com/lenovo) for the Options Continuation Program.

**ThinkPlus™.7 service upgrade options<sup>7</sup> for 1-year warranty models:**

1-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9189
2-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9187
2-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9190
3-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9188
3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9191

**ThinkPlus™.7 service upgrade options<sup>7</sup> for 3-year warranty models:**

3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9192
3-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9193
4-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9194
4-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9195
4-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9196

Post-warranty annual maintenance agreements at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)

Lenovo ThinkCentre A57 Small (9704) and Tower (9702)



Lenovo ThinkCentre A57 Small



Lenovo ThinkCentre A57 Small



Lenovo ThinkCentre A57 Small



Lenovo ThinkCentre A57 Small with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre A57 Tower



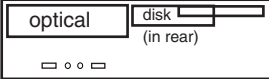
Lenovo ThinkCentre A57 Tower

# ThinkCentre® A57 Small (9704) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A57	9704-ALU	2x3	Pentium E2180	2.00	1MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA	XP Pro	1-yr	None	Mar 08
A57	9704-AMU	2x3	Pentium E2180	2.00	1MB	Dual	512MB	160GB	Combo	GMA	XP Pro	1-yr	None	Mar 08
A57	9704-ANU	2x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB	DVD±RW	GMA	XP Pro	1-yr	None	Mar 08
A57	9704-APU	2x3	Pentium E2200	2.20	1MB	Dual	1GB	160GB	Combo	GMA	XP Pro	1-yr	None	Mar 08
A57	9704-BDU	2x3	Pentium E2200	2.20	1MB	Dual	2GB	160GB	DVD±RW	GMA	XP Pro	1-yr	None	Mar 08

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning	Quality, reliability, and security for small/medium businesses	
Processor	Intel® Pentium® Dual-Core Processor E2180 or E2200 with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 1MB shared L2 cache	Small
Implementation	Processor in FC-LGA6 package in LGA775 socket	
Memory	512MB, 1GB, or 2GB std, 4GB max <sup>8</sup> , PC2-5300 667MHz DDR2, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)
Graphics	Intel Graphics Media Accelerator 3100 (GMA 3100), integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3
SATA disk	80GB or 160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors	
eSATA port	None	
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	Intel G31 Express Chipset; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing	
Preloaded operating system <sup>20</sup>	- Microsoft® Windows® XP Professional with Vista® COA ◆ Disk-to-Disk Recovery (in hidden protected area)	RoHS-compliant
Preloaded applications <sup>5</sup>	• Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • System Migration Assistant • Norton Internet Security™ (90 days of virus definitions) • Diskeeper® Home • PC-Doctor™ (diagnostics) • Adobe® Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • Microsoft Office 2007 Trial (60-day) • Multimedia Center for Think Offerings (combo, DVD, DVD±RW) • Sonic RecordNow and Drive Letter Access (combo, DVD±RW) • Corel® WinDVD® (combo, DVD, DVD±RW) • Corel WinDVD Creator (DVD±RW)	<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ 1-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>⇒ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
Accessories	1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 USB 2.0 Super Multi-Burner Drive 41N5565 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 Acc Guide in pdf lenovo.com/accessoriesguide Other accessories at lenovo.com/accessories	

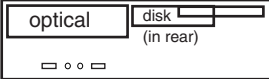
See footnotes for important warranty information  
US models announced February 26, 2008  
US models withdrawn effective May 2009

# ThinkCentre® A57 Small (9704) - TopSeller (Vista®) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Chassis intr switch	Vista preload	Vista logo	Global Educ	Avail date
A57	9704-BRU	2x3	Pentium E2180	2.00	1MB	Dual	512MB	80GB <sup>2</sup>	DVD	GMA		Bus32	Basic	None	Apr 08
A57	9704-BSU	2x3	Pentium E2180	2.00	1MB	Dual	1GB	160GB	Combo	GMA		Bus32	Basic	None	Apr 08
A57	9704-BFU	2x3	Pentium E2180	2.00	1MB	Dual	2GB	160GB	DVD±RW	GMA		Bus32	Prem	None	Apr 08
A57	9704-AKU	2x3	Core 2 Duo E4600	2.40	2MB	Dual	2GB	160GB	Combo	GMA	Switch	Bus32	Prem	None	Mar 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

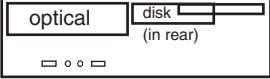
Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Pentium® Dual-Core Processor E2180</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2MB shared L2 cache	<b>Small</b>	 <p>Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>
Implementation	Processor in FC-LGA6 package in LGA775 socket		
Memory	<b>512MB, 1GB, or 2GB std, 4GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ 1-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter		
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
eSATA port	None		
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvel® 88E8056, PCIe x1, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, autosenesing		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Microsoft® Windows® Vista Business Edition (32-bit)	1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ADD2 DVI-I PCIe Connection Adapter 73P2516 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
US models announced February 26 or April 8, 2008  
US models withdrawn effective May 2009

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(TUNSI-2) May 2009

Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>A57</b>	9704-B5U	2x3	Pentium E2200	2.20	2	512MB	160GB <sup>2</sup>	DVD	GMA	XP Pro	Basic	1-yr	None	Nov 08
<b>A57</b>	9704-B6U	2x3	Pentium E2200	2.20	2	1GB	160GB	DVD±RW	GMA	XP Pro	Premium	1-yr	None	Nov 08
<b>A57</b>	9704-A53	2x3	Core 2 Duo E8400	3.00	2	2GB	250GB	DVD±RW	GMA	Bus32	Premium	1-yr	None	Feb 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Pentium® Processor E2200</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Core™ 2 Duo Processor E8400</b> with dual-core, Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache						<b>Small</b>				
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket							Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader/diskette)			
Memory	<b>512MB, 1GB, or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available							Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3			
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter							<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.1 lb (7.3 kg) in maximum configuration</li> <li>• Bays 1, 2, 3 flip up (latched and pivoting)</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• Steel chassis supports 100 lb (45kg) monitor on top</li> <li>• System floor stand for vertical orientation</li> </ul>			
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening										
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7										
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive										
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive										
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors										
eSATA port	None										
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector										
Diskette drive	None										
Media reader	None										
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions							<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)										
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, autosensing							Supports ThinkVantage <sup>®</sup> technologies			
<b>Preloaded operating system<sup>20</sup></b>								RoHS-compliant			
- <i>Some</i> : Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA								<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇨ 1-year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>⇨ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>⇨ Post warranty maintenance services available</li> <li>⇨ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>			
- <i>Some</i> : Microsoft Windows Vista Business Edition (32-bit)											
<b>Preloaded applications<sup>5</sup> (all OSes)</b>											
• Rescue and Recovery <sup>™</sup>											
• Client Security Solution <sup>™</sup>											
• ThinkVantage Productivity Center											
• System Migration Assistant											
• Norton Internet Security <sup>™</sup> (90 days of virus definitions)											
• Diskeeper <sup>®</sup> Home											
• PC-Doctor <sup>™</sup> (diagnostics)											
• Adobe <sup>®</sup> Reader											
• Windows Live <sup>™</sup> Toolbar											
• Windows Live Search											
• Picasa from Google											
• Microsoft Office 2007 Trial (60-day)											
• Multimedia Center for Think Offerings (DVD, DVD±RW) (XP)											
• Sonic RecordNow and Drive Letter Access (DVD±RW)											
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)											
• Corel WinDVD Creator (DVD±RW) (XP)											
<b>Accessories</b>											
1GB PC2-5300 DDR2 UDIMM (TopSeller)								43R2001			
2GB PC2-5300 DDR2 UDIMM (TopSeller)								43R2002			
250GB SATA 3.0Gb/s Disk (7200 rpm)								41N3015			
500GB SATA 3.0Gb/s Disk (7200 rpm)								43R1990			
USB Portable Diskette Drive								05K9276			
USB 2.0 Lenovo Multimedia Headset								40Y8518			
USB 2.0 Lenovo Webcam								40Y8519			
USB 2.0 Essential Memory Key 32GB								45K1258			
USB 2.0 Ultra Secure Memory Key 2GB								45J5916			
USB 2.0 Ultra Secure Memory Key 4GB								45J5917			
USB 2.0 Ultra Secure Memory Key 8GB								45J5918			
USB 2.0 Portable 160GB Hard Disk								43R1784			
USB 2.0 Portable Secure 320GB Hard Disk								43R2019			
DVD-ROM DL SATA 1.5Gb/s 16-48X Max								41N5618			
Super Multi-Burner DL DVD±RW SATA Drive								41N5620			
ThinkVision <sup>®</sup> L1700p 17" Monitor								9417HE2			
ThinkVision L1940p Wide 19" Monitor								4424HB6			
ThinkVision L2240p Wide 22" Monitor								4422HB6			
ThinkVision L2440p Wide 24" Monitor								4420HB2			
Wireless Kbd & Opt Wheel Mouse (via USB)								73P4067			
Laser Tilt Wheel Mouse (USB, PS/2)								41U3074			
Kensington Cable Lock from Lenovo								73P2582			
ADD2 DVI-I PCIe Connection Adapter								73P2516			
ADD2 DVI-D Monitor Connection (HDCP)								43R1985			
ATI <sup>™</sup> Radeon <sup>™</sup> HD 2400 Pro 128MB								43R1961			
ATI Radeon HD 2400 XT 256MB								43R1962			
Acc Guide in pdf lenovo.com/accessoriesguide											
Other accessories at lenovo.com/accessories											

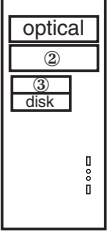
See footnotes for important warranty information  
 US models announced October 21, 2008 or February 12, 2009  
 US models withdrawn effective May 2009





Name	Type-model	Slot x bay	Processor	GHz	Cores	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Vista logo	Limited warranty <sup>1</sup>	Global Educ	Avail date
<b>A57</b>	9702-FDU	4x4	Pentium E2200	2.20	2	512MB	160GB <sup>2</sup>	None	DVD	GMA	XP Pro	Basic	1-yr	None	Nov 08
<b>A57</b>	9702-F9U	4x4	Pentium E2200	2.20	2	1GB	160GB	None	DVD±RW	GMA	XP Pro	Premium	1-yr	None	Nov 08

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning	<i>Quality, reliability, and security for small/medium businesses</i>										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Processor	<b>Intel® Pentium® Dual-Core Processor E2200 with dual-core,</b> 800MHz system bus, and 1MB L2 cache Processor in FC-LGA6 package in LGA775 socket										
Implementation	Processor in FC-LGA6 package in LGA775 socket										
Memory	<b>512MB or 1GB std,</b> 4GB max <sup>3</sup> , <b>PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available										
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter										
SATA disk	<b>160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in ICH7 SATA DVD <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive SATA DVD±RW <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors eSATA port None EIDE controller Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector Diskette drive None Media reader None										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
Chipset	<b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions										<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)										
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)										
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec										
Speaker	One internal speaker for business audio										
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>										
Intel AMT	None										
Modem	None										
Security chip	None										
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo										
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo										
Power supply	280 watts with variable speed fan, manual switch										
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>									
- Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA		1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001									
◇ Disk-to-Disk Recovery (in hidden protected area)		2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002									
		250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015									
		500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990									
		USB 2.0 Lenovo Multimedia Headset 40Y8518									
		USB 2.0 Lenovo Webcam 40Y8519									
<b>Preloaded applications<sup>5</sup></b>		USB 2.0 Essential Memory Key 32GB 45K1258									
• Rescue and Recovery™		USB 2.0 Ultra Secure Memory Key 4GB 45J5917									
• Client Security Solution™		USB 2.0 Ultra Secure Memory Key 8GB 45J5918									
• ThinkVantage Productivity Center		USB 2.0 Portable 160GB Hard Disk 43R1784									
• System Migration Assistant		USB 2.0 Portable Secure 320GB Hard Disk 43R2019									
• Norton Internet Security™		DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618									
• Diskeeper <sup>®</sup> Home		Super Multi-Burner DL DVD±RW SATA Drive 41N5620									
• PC-Doctor™ (diagnostics)		ThinkVision <sup>®</sup> L1700p 17" Monitor 9417HE2									
• Adobe <sup>®</sup> Reader		ThinkVision L1940p Wide 19" Monitor 4424HB6									
• Windows Live™ Toolbar		ThinkVision L2240p Wide 22" Monitor 4422HB6									
• Windows Live Search		ThinkVision L2440p Wide 24" Monitor 4420HB2									
• Picasa from Google		Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067									
• Microsoft Office 2007 Trial (60-day)		Laser Tilt Wheel Mouse (USB, PS/2) 41U3074									
• Multimedia Center for Think Offerings (DVD, DVD±RW)		Kensington Cable Lock from Lenovo 73P2582									
• Sonic RecordNow and Drive Letter Access (DVD±RW)		ADD2 DVI-I PCIe Connection Adapter 73P2516									
• Corel <sup>®</sup> WinDVD <sup>®</sup> (DVD, DVD±RW)		ADD2 DVI-D Monitor Connection (HDCP) 43R1985									
• Corel WinDVD Creator (DVD±RW)		ATI™ Radeon™ HD 2400 Pro 128MB 43R1961									
		ATI Radeon HD 2400 XT 256MB 43R1962									
		ATI Radeon HD 2600 XT 512MB 43R1963									
		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>									
		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>									
		Supports ThinkVantage <sup>®</sup> technologies									
		RoHS-compliant									
		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>									

See footnotes for important warranty information  
 US models announced October 21, 2008  
 US models withdrawn effective May 2009

# ThinkCentre® A57 Tower (9702) - TopSeller (Vista®) - withdrawn

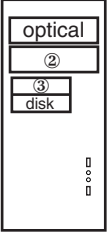
Personal Systems Reference (PSREF)

Name	Type	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>o</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Chassis intr switch	Vista preload	Vista logo	Global Educ	Avail date
<b>A57</b>	9702-B4U	4x4	Celeron 430	1.80	512KB	Single	512MB	80GB <sup>2</sup>	No	DVD	GMA		Home Basic	Basic	No	Mar 08
<b>A57</b>	9702-DAU	4x4	Pentium E2180	2.00	1MB	Dual	512MB	80GB	No	DVD	GMA		Business32	Basic	No	Apr 08
<b>A57</b>	9702-D3U	4x4	Pentium E2180	2.00	1MB	Dual	1GB	160GB	No	Combo	GMA		Business32	Basic	No	May 08
<b>A57</b>	9702-D1U	4x4	Pentium E2180	2.00	1MB	Dual	2GB	160GB	No	DVD±RW	GMA		Business32	Prem	No	Apr 08
<b>A57</b>	9702-AMU	4x4	Core 2 Duo E4600	2.40	2MB	Dual	2GB	160GB	No	Combo	GMA	Switch	Business32	Prem	No	Mar 08
<p>• <b>These small and medium business (SMB) models are part of the US TopSeller™ Program</b></p> <p>• <b>These models have a 1-year limited warranty<sup>1</sup></b></p>																
Positioning Processor	<p><i>Quality, reliability, and security for small/medium businesses</i></p> <p><b>Intel® Celeron® Processor 430</b> with single-core, Intel 64 Tech, Execute Disable Bit, 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2180</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600</b> with <b>dual-core</b>, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2MB shared L2 cache</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2 lb (11.0 kg) in max configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>					
Implementation	<p>Processor in FC-LGA6 package in LGA775 socket</p>										<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>					
Memory	<p><b>512MB, 1GB, or 2GB std</b>, 4GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available</p>										<p>Slot 1: half-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCI Express x1</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>					
Graphics	<p><b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b>, integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter</p>										<p><b>Security</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>USB port disablement</li> <li><i>Some:</i> Chassis intrusion switch</li> </ul>					
SATA disk	<p><b>80GB or 160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>										<p>Supports ThinkVantage® technologies</p>					
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in ICH7</p>										<p>RoHS-compliant</p>					
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max<sup>4</sup> Drive</p>															
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>															
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>															
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>															
eSATA port	<p>None</p>															
EIDE controller	<p>Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar</p>															
Diskette drive	<p>None</p>															
Media reader	<p>None</p>										<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>					
Chipset	<p><b>Intel G31 Express Chipset</b>; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions</p>															
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>															
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p>															
Internal connector	<p>Two USB 2.0 planar connectors (one used; one open for media reader)</p>															
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)</p>															
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>															
Speaker	<p>One internal speaker for business audio</p>															
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®</p>															
Intel AMT	<p>None</p>															
Modem	<p>None</p>															
Security chip	<p>None</p>															
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>															
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>															
Power supply	<p>280 watts with variable speed fan, manual switch</p>															
<b>Preloaded operating system<sup>2o</sup></b>	<p><b>Accessories</b></p> <p>- <i>Some:</i> Microsoft® Windows® Vista Home Basic Edition (32-bit) 1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001</p> <p>- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit) 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002</p> <p>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</p> <p>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</p> <p>USB 2.0 Lenovo Multimedia Headset 40Y8518</p> <p>USB 2.0 Lenovo Webcam 40Y8519</p> <p>USB 2.0 Essential Memory Key 32GB 45K1258</p> <p>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</p> <p>USB 2.0 Portable 160GB Hard Disk 43R1784</p> <p>USB 2.0 Portable Secure 320GB Hard Disk 43R2019</p> <p>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</p> <p>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</p> <p>ThinkVision® L2240p Wide 22" Monitor 4422HB6</p> <p>ThinkVision L2440p Wide 24" Monitor 4420HB2</p> <p>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</p> <p>Kensington Cable Lock from Lenovo 73P2582</p> <p>ADD2 DVI-I PCIe Connection Adapter 73P2516</p> <p>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</p> <p>ATI™ Radeon™ HD 2400 Pro 128MB 43R1961</p> <p>ATI Radeon HD 2400 XT 256MB 43R1962</p> <p>ATI Radeon HD 2600 XT 512MB 43R1963</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>															

See footnotes for important warranty information  
US models announced February 26, April 8, or April 29, 2008  
US models withdrawn effective May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
A57	9702-H8U	4x4	Celeron E1200	1.60	512KB	Dual	1GB	160GB <sup>b</sup>	No	DVD±RW	GMA	Home Basic	Basic	No	Dec 08
A57	9702-H9U	4x4	Pentium E2160	1.80	1MB	Dual	2GB	160GB	No	DVD±RW	GMA	Home Basic	Basic	No	Dec 08
A57	9702-HBU	4x4	Pentium E2160	1.80	1MB	Dual	2GB	320GB	No	DVD±RW	GMA	Home Premium	Basic	No	Dec 08
A57	9702-HCU	4x4	Pentium E5200	2.50	2MB	Dual	2GB	160GB	No	DVD±RW	GMA	Home Basic	Basic	No	Dec 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Celeron® Dual-Core Processor E1200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Dual-Core Processor E2160</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium Dual-Core Processor E5200</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, and 800MHz system bus with 2MB L2 cache	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in FC-LGA6 package in LGA775 socket	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>a</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>160GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	RoHS-compliant
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 1-year parts and labor</li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations)<sup>7</sup></b> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
- <i>Some:</i> Microsoft® Windows® Vista Home Basic Edition (32-bit)	1GB PC2-6400 NP DDR2 UDIMM 41U2977	
- <i>Some:</i> Microsoft Windows Vista Home Premium Edition (32-bit)	2GB PC2-6400 NP DDR2 UDIMM 41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
	USB 2.0 Lenovo Multimedia Headset 40Y8518	
	USB 2.0 Lenovo Webcam 40Y8519	
	USB 2.0 Essential Memory Key 32GB 45K1258	
	USB 2.0 Ultra Secure Memory Key 4GB 45J5917	
	USB 2.0 Ultra Secure Memory Key 8GB 45J5918	
	USB 2.0 Portable 160GB Hard Disk 43R1784	
	USB 2.0 Portable Secure 320GB Hard Disk 43R2019	
	ThinkVision® L1700p 17" Monitor 9417HE2	
	ThinkVision L1940p Wide 19" Monitor 4424HB6	
	ThinkVision L2240p Wide 22" Monitor 4422HB6	
	ThinkVision L2440p Wide 24" Monitor 4420HB2	
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074	
	Kensington Cable Lock from Lenovo 73P2582	
	ADD2 DVI-I PCIe Connection Adapter 73P2516	
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
	ATI™ Radeon™ HD 2400 Pro 128MB 43R1961	
	ATI Radeon HD 2400 XT 256MB 43R1962	
	ATI Radeon HD 2600 XT 512MB 43R1963	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

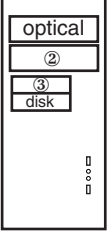
See footnotes for important warranty information  
 US models announced November 25, 2008  
 US models withdrawn effective January or May 2009

# ThinkCentre® A57 Tower (9851) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A57	9851-B1U	4x4	Pentium E2180	2.00	1MB	Dual	512MB	80GB <sup>2</sup>	None	DVD	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-B2U	4x4	Pentium E2180	2.00	1MB	Dual	512MB	160GB	None	Combo	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-B3U	4x4	Pentium E2180	2.00	1MB	Dual	1GB	160GB	None	DVD±RW	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-A6U	4x4	Pentium E2200	2.20	1MB	Dual	1GB	160GB	None	Combo	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-BSU	4x4	Pentium E2200	2.20	1MB	Dual	2GB	160GB	None	DVD±RW	GMA	XP Pro	3-yr	None	Apr 08
A57	9851-B4U	4x4	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	None	Combo	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-B5U	4x4	Core 2 Duo E4600	2.40	2MB	Dual	2GB	160GB	None	DVD±RW	GMA	XP Pro	3-yr	None	Mar 08
A57	9851-A7U	4x4	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	None	DVD±RW	GMA	XP Pro	3-yr	None	Apr 08

**• These small and medium business (SMB) models are part of the US TopSeller™ Program**

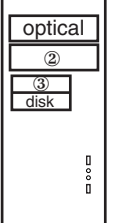
Positioning Processor	<i>Quality, reliability, and security for small/medium businesses</i> <b>Intel® Pentium® Dual-Core Processor E2180 or E2200</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600</b> with <b>dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200</b> with <b>dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation		
Memory	<b>512MB, 1GB, or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇨ <b>3-year parts and labor</b></li> <li>⇨ <b>International Warranty Service<sup>9</sup></b></li> <li>⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>⇨ <b>Post warranty maintenance services available</b></li> <li>⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
EIDE controller	Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express <sup>®</sup> x1, PCI 2.3, USB, LPC bus / ITE Tech <sup>®</sup> IT8718 Super I/O for serial, parallel, keyboard, mouse functions	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Internal connector	Two USB 2.0 planar connectors (one used; one open for media reader)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek <sup>®</sup> ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8056, PCIe x1, Wake on LAN <sup>®</sup>	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo <sup>®</sup> logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Microsoft <sup>®</sup> Windows <sup>®</sup> XP Professional with Vista <sup>®</sup> COA	1GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2001
◆ Disk-to-Disk Recovery (in hidden protected area)	2GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2002
	500GB SATA 3.0Gb/s (7200 rpm)	43R1990
	USB 2.0 Lenovo Multimedia Headset	40Y8518
	USB 2.0 Essential Memory Key 32GB	45K1258
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	USB 2.0 Portable Secure 320GB Hard Disk	43R2019
• Rescue and Recovery™	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618
• Client Security Solution™	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
• ThinkVantage Productivity Center	ThinkVision <sup>®</sup> L2240p Wide 22" Monitor	4422HB6
• System Migration Assistant	ThinkVision L2440p Wide 24" Monitor	4420HB2
• Norton Internet Security™	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067
• Diskeeper <sup>®</sup> Home	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074
• Microsoft Office 2007 Trial (60-day)	Kensington Cable Lock from Lenovo	73P2582
• Multimedia Center for Think Offerings (combo, DVD, DVD±RW)	ADD2 DVI-I PCIe Connection Adapter	73P2516
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	ADD2 DVI-D Monitor Connection (HDCP)	43R1985
• Corel <sup>®</sup> WinDVD <sup>®</sup> (combo, DVD, DVD±RW)	ATI™ Radeon™ HD 2400 Pro 128MB	43R1961
• Corel WinDVD Creator (DVD±RW)	ATI Radeon HD 2400 XT 256MB	43R1962
	ATI Radeon HD 2600 XT 512MB	43R1963
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced February 26 or March 18, 2008  
US models withdrawn effective May 2009

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(TUNS1-5) May 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Core	Memory <sup>9</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Vista preload	Vista logo	Global Educ	Avail date
A57	9851-C4U	4x4	Pentium E2180	2.00	1MB	Dual	1GB	160GB <sup>2</sup>	None	Combo	GMA	Business32	Basic	None	May 08
A57	9851-BYU	4x4	Pentium E2180	2.00	1MB	Dual	2GB	160GB	None	DVD±RW	GMA	Business32	Premium	None	Apr 08
A57	9851-C9U	4x4	Core 2 Duo E4600	2.40	2MB	Dual	1GB	160GB	None	Combo	GMA	Business32	Basic	None	May 08
A57	9851-CCU	4x4	Core 2 Duo E4600	2.40	2MB	Dual	2GB	160GB	None	DVD±RW	GMA	Business32	Premium	None	Apr 08
A57	9851-CDU	4x4	Core 2 Duo E8200	2.66	6MB	Dual	1GB	160GB	None	DVD±RW	GMA	Business32	Basic	None	Apr 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

<b>Positioning Processor</b> <i>Quality, reliability, and security for small/medium businesses</i> <b>Intel® Pentium® Dual-Core Processor E2180</b> with dual-core, Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 1MB shared L2 cache or <b>Intel Core™ 2 Duo Processor E4600 with dual-core</b> , Intel 64 Technology, Execute Disable Bit, EIST, 800MHz system bus, and 2MB shared L2 cache or <b>Intel Core 2 Duo Processor E8200 with dual-core</b> , Intel 64 Technology, Virtualization Technology, Execute Disable Bit, EIST, TXT, and 1333MHz system bus with 6MB shared L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2 lb (11.0 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																											
<b>Implementation</b>	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																																											
<b>Memory</b>	Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3																																											
<b>Graphics</b> <b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory (up to 256MB), one analog VGA DB-15 connector, supports dual independent display with optional ADD2 adapter  <b>SATA disk</b> 160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts <b>SATA controller</b> Serial ATA, SATA 3.0Gb/s, integrated in ICH7 <b>SATA Combo</b> Some: CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive <b>SATA DVD±RW</b> Two SATA cables (each 1-drop to device), four SATA connectors on planar <b>SATA cables</b> None <b>eSATA port</b> Enhanced IDE, ATA-100, integrated in ICH7, one EIDE connector on planar <b>EIDE controller</b> None <b>Diskette drive</b> None <b>Media reader</b> None  <b>Chipset</b> <b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7) for SATA 3.0Gb/s, ATA-100 EIDE, PCI Express® x1, PCI 2.3, USB, LPC bus / ITE Tech® IT8718 Super I/O for serial, parallel, keyboard, mouse functions  <b>Front ports</b> Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm) <b>Rear ports</b> Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)  <b>Internal connector</b> Two USB 2.0 planar connectors (one used; one open for media reader) <b>Rear audio ports</b> Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm) <b>Audio</b> High Definition (HD) Audio, Realtek® ALC662 codec <b>Speaker</b> One internal speaker for business audio <b>Ethernet</b> Gigabit ethernet on planar, Marvell® 88E8056, PCIe x1, Wake on LAN® <b>Intel AMT</b> None <b>Modem</b> None <b>Security chip</b> None  <b>Keyboard</b> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo <b>Mouse</b> Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo <b>Power supply</b> 280 watts with variable speed fan, manual switch	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies RoHS-compliant <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>➤ <b>3-year parts and labor</b></li> <li>➤ <b>International Warranty Service<sup>9</sup></b></li> <li>➤ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>➤ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>➤ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>➤ <b>Post warranty maintenance services available</b></li> <li>➤ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																											
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® Vista Business Edition (32-bit)  <b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD±RW)</li> </ul>	<b>Accessories</b> <table border="0"> <tr> <td>1GB PC2-5300 DDR2 UDIMM (TopSeller)</td> <td>43R2001</td> </tr> <tr> <td>2GB PC2-5300 DDR2 UDIMM (TopSeller)</td> <td>43R2002</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>USB 2.0 Lenovo Multimedia Headset</td> <td>40Y8518</td> </tr> <tr> <td>USB 2.0 Lenovo Webcam</td> <td>40Y8519</td> </tr> <tr> <td>USB 2.0 Essential Memory Key 32GB</td> <td>45K1258</td> </tr> <tr> <td>USB 2.0 Ultra Secure Memory Key 8GB</td> <td>45J5918</td> </tr> <tr> <td>USB 2.0 Portable Secure 320GB Hard Disk</td> <td>43R2019</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ThinkVision® L1940p Wide 19" Monitor</td> <td>4424HB6</td> </tr> <tr> <td>ThinkVision L2240p Wide 22" Monitor</td> <td>4422HB6</td> </tr> <tr> <td>ThinkVision L2440p Wide 24" Monitor</td> <td>4420HB2</td> </tr> <tr> <td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td> <td>73P4067</td> </tr> <tr> <td>Laser Tilt Wheel Mouse (USB, PS/2)</td> <td>41U3074</td> </tr> <tr> <td>Kensington Cable Lock from Lenovo</td> <td>73P2582</td> </tr> <tr> <td>ADD2 DVI-I PCIe Connection Adapter</td> <td>73P2516</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> <tr> <td>ATI™ Radeon™ HD 2400 P 128MB</td> <td>43R1961</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 2600 XT 512MB</td> <td>43R1963</td> </tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		1GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2001	2GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2002	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ADD2 DVI-I PCIe Connection Adapter	73P2516	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 P 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963
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ATI Radeon HD 2400 XT 256MB	43R1962																																											
ATI Radeon HD 2600 XT 512MB	43R1963																																											

See footnotes for important warranty information  
 US models announced April 8 or April 29, 2008  
 US models withdrawn effective May 2009

Partial list of accessories supported on ThinkCentre A57

Memory

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	<i>ann 06/28/05</i>
1GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2001	<i>ann 03/25/08</i>
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	<i>ann 06/28/05</i>
2GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2002	<i>ann 03/25/08</i>
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	<i>ann 09/26/06</i>
512MB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2976	<i>ann 09/26/06</i>
1GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2977	<i>ann 09/26/06</i>
2GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2978	<i>ann 01/08/08</i>

<sup>48</sup> When PC2-6400 is installed with systems that have PC2-5300 memory, PC2-6400 will operate at the PC2-5300 memory speed.

Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	<i>ann 09/26/06</i>
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	<i>ann 09/26/06</i>

Storage and removable storage

80GB SATA 3.0Gb/s Disk (7200 rpm)	09N4253	<i>ann 05/19/03</i>
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	<i>ann 05/19/03</i>
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	<i>ann 01/24/06</i>
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	<i>ann 11/06/07</i>
USB Portable Diskette Drive	05K9276	<i>ann 06/05/00</i>
USB 2.0 Essential Memory Key 1GB	41U4940	<i>ann 01/23/07</i>
USB 2.0 Essential Memory Key 2GB	41U4944	<i>ann 01/23/07</i>
USB 2.0 Essential Memory Key 4GB	45J7904	<i>ann 06/24/08</i>
USB 2.0 Essential Memory Key 8GB	45J7905	<i>ann 07/15/08</i>
USB 2.0 Essential Memory Key 32GB	45K1258	<i>ann 10/28/08</i>
USB 2.0 Security Memory Key 1GB	41U5118	<i>ann 07/17/07</i>
USB 2.0 Security Memory Key 2GB	41U5119	<i>ann 07/17/07</i>
USB 2.0 Security Memory Key 4GB	41U5120	<i>ann 07/17/07</i>
USB 2.0 Ultra Secure Memory Key 1GB	45J5915	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 2GB	45J5916	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 4GB	45J5917	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 8GB	45J5918	<i>ann 08/26/08</i>
USB 2.0 Portable 160GB Hard Disk	43R1784	<i>ann 09/23/08</i>
USB 2.0 Portable 320GB Hard Disk	45K1689	<i>ann 03/17/09</i>
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	<i>ann 11/18/08</i>
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	<i>ann 11/18/08</i>
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	<i>ann 01/05/06</i>
USB 2.0 Super Multi-Burner Drive	41N5565	<i>ann 01/23/07</i>

Graphics

Small 9704 supports Low Profile 35 watts max:

ADD2 DVI-I PCIe Connection Adapter	73P2516	<i>ann 06/28/05</i>
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	<i>ann 11/06/07</i>
ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	<i>ann 11/06/07</i>
ATI Radeon HD 2400 XT 256MB	43R1962	<i>ann 11/06/07</i>

Tower 9702/9851 support 75 watts max:

ADD2 DVI-I PCIe Connection Adapter	73P2516	<i>ann 06/28/05</i>
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	<i>ann 11/06/07</i>
ATI Radeon HD 2400 Pro 128MB	43R1961	<i>ann 11/06/07</i>
ATI Radeon HD 2400 XT 256MB	43R1962	<i>ann 11/06/07</i>
ATI Radeon HD 2600 XT 512MB	43R1963	<i>ann 11/06/07</i>

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

Keyboard

Preferred Pro USB Keyboard	73P5220	<i>ann 06/21/05</i>
Preferred Pro Full Size PS/2 Keyboard	31P7415	<i>ann 06/04/02</i>
Enhanced Performance USB Keyboard	73P2620	<i>ann 03/23/04</i>
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	<i>ann 12/07/04</i>
Lenovo® USB Fingerprint Keyboard	73P4730	<i>ann 02/22/05</i>

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

Mouse

Optical Wheel Mouse (USB)	06P4069	<i>ann 05/21/03</i>
Optical ScrollPoint® Mouse (USB, PS/2)	31P7405	<i>ann 08/27/02</i>
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	<i>ann 01/23/07</i>
Lenovo Wireless Laser Mouse (blk, via USB)	45K1696	<i>ann 11/25/08</i>
Lenovo Wireless Laser Mouse (red, via USB)	51J0198	<i>ann 11/25/08</i>

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

Multimedia

USB 2.0 Lenovo Multimedia Headset	40Y8518	<i>ann 06/27/06</i>
USB 2.0 Lenovo Webcam	40Y8519	<i>ann 08/29/06</i>

Security

Kensington® Cable Lock from Lenovo	73P2582	<i>ann 12/29/03</i>
Kensington Twin Head Cable Lock	45K1620	<i>ann 09/30/08</i>
USB Gemplus GemPC Smart Card Reader	41N3040	<i>ann 02/21/06</i>

Monitors

ThinkVision® L174 17" Monitor	9227AE1	<i>ann 04/15/08</i>
ThinkVision L1700p 17" Monitor	9417HE2	<i>ann 09/17/08</i>
ThinkVision L1900p 19" Monitor	4431HE1	<i>ann 11/11/08</i>
ThinkVision L1940p Wide 19" Monitor	4424HB6	<i>ann 09/17/08</i>
ThinkVision L200p Wide 20.1" Monitor	4438HB6	<i>ann 04/15/08</i>
ThinkVision L2240p Wide 22" Monitor	4422HB6	<i>ann 09/17/08</i>
ThinkVision L2440p Wide 24" Monitor	4420HB2	<i>ann 09/17/08</i>
ThinkVision L2440x Wide 24" Monitor	4421HB2	<i>ann 09/17/08</i>

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

Monitor Accessories<sup>46</sup>

ThinkVision USB Soundbar	40Y7616	<i>ann 08/23/05</i>
ThinkVision Soundbar	45K1263	<i>ann 09/16/08</i>
Kensington Cable Lock from Lenovo	73P2582	<i>ann 12/29/03</i>
Kensington Twin Head Cable Lock	45K1620	<i>ann 09/30/08</i>
Radial Arm	19K4464	<i>ann 05/05/00</i>

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

Medialess License Key (MLK)

Microsoft® Office 2007 Basic, English	43R1528	<i>ann 01/31/07</i>
Microsoft Office 2007 Small Business, Engl	43R1534	<i>ann 01/31/07</i>
Microsoft Office 2007 Professional, English	43R1531	<i>ann 01/31/07</i>

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre A58e Tower



Lenovo ThinkCentre A58e Tower with  
Lenovo ThinkVision monitor



Lenovo ThinkCentre A58e Tower



Lenovo ThinkCentre A58e Tower



Lenovo ThinkCentre A58e Tower



Lenovo ThinkCentre A58e Tower




# ThinkCentre® A58e Tower (0841) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Preload	Global Educ	Avail date
A58e	0841-A1U	4x2	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	DVD	GMA 3100	XP Pro	None	Oct 09
A58e	0841-A2U	4x2	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA 3100	XP Pro	None	Oct 09
A58e	0841-A3U	4x2	Pentium E5300	2.60	2MB	2	3GB	320GB	DVD±RW	GMA 3100	XP Pro	None	Oct 09


- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Affordable and reliable computing for everyday business tasks**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning	<i>Quality and reliability for small/medium business</i>							<b>Tower</b>					
Processor	<b>Intel® Celeron® Processor E3200 with dual-core</b> , 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache							<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 16.7" D X 14.6" H</li> <li>• 175mm W X 425mm D X 371mm H</li> <li>• 19.6 lb (8.9 kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> </ul>					
Implementation	Processor in LGA775 package							Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> </ul>			
Memory	<b>1GB, 2GB, or 3GB std.</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available							Slot 1: half-length, full-height, PCI Express x16 Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100)</b> , integrated graphics in G31, uses main memory, one analog VGA DB-15 connector									<b>RoHS-compliant</b>			
SATA disk	<b>250GB or 320GB</b> , SATA 3.0Gb/s 7200 rpm												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7									<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive												
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors												
eSATA port	None												
Diskette drive	None												
Media reader	None												
Chipset	<b>Intel G31 Express Chipset</b> ; I/O Controller Hub 7 (ICH7)												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	None												
IEEE 1394	None												
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo												
Power supply	180 watts, universal, manual switch												
<b>Preloaded operating system<sup>20</sup></b>	- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows Vista® Business												
<b>Preloaded applications<sup>5</sup> (only some listed)</b>	<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• Norton™ Internet Security 2009 (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>												
<b>Accessories</b>	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 Lenovo USB-to-DVI Monitor Adapter 45K5296 ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 More accessories on O-A58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>												

See footnotes for important warranty information  
 US models announced October 27, 2009  
 US models withdrawn effective December 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Win7 preload	Global Educ	Avail date
A58e	0841-A4U	4x2	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	DVD	GMA 3100	Pro 32	None	Jan 10
A58e	0841-A5U	4x2	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA 3100	Pro 32	None	Jan 10
A58e	0841-A6U	4x2	Pentium E5300	2.60	2MB	2	3GB	320GB	DVD±RW	GMA 3100	Pro 32	None	Jan 10
A58e	0841-ADU	4x2	Pentium E5400	2.70	2MB	2	2GB	250GB	DVD±RW	GMA 3100	Pro 32	None	Jan 10
A58e	0841-AEU	4x2	Pentium E5400	2.70	2MB	2	3GB	320GB	DVD±RW	GMA 3100	Pro 32	None	Jan 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- Affordable and reliable computing for everyday business tasks
- These models have a 1-year limited warranty<sup>1</sup>

Positioning	<i>Quality and reliability for small/medium business</i>		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 16.7" D X 14.6" H</li> <li>• 175mm W X 425mm D X 371mm H</li> <li>• 19.6 lb (8.9 kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> </ul>	
Processor	<b>Intel® Celeron® Processor E3200 with dual-core,</b> 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5300 or E5400 with dual-core,</b> 800MHz system bus, and 2MB L2 cache			
Implementation	Processor in LGA775 socket			
Memory	<b>1GB, 2GB, or 3GB std.</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available			
Graphics	<b>Intel Graphics Media Accelerator 3100 (GMA 3100),</b> integrated graphics in G31, uses main memory, one analog VGA DB-15 connector		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
SATA disk	<b>250GB or 320GB,</b> SATA 3.0Gb/s 7200 rpm		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G31 Express Chipset;</b> I/O Controller Hub 7 (ICH7)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	None			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		RoHS-compliant	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	180 watts, universal, manual switch		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® 7 Professional 32			
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• ThinkVantage® Product Recovery</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Norton™ Internet Security 2009 (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> </ul>			
<b>Accessories</b>	1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 Lenovo USB-to-DVI Monitor Adapter 45K5296 DisplayPort™ to Single-link DVI-D Cable 45J7915 DisplayPort to VGA Monitor Cable 57Y4393 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636 More accessories on O-A58E sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			

See footnotes for important warranty information  
 US models announced December 15, 2009  
 US models withdrawn effective July 2010

## Partial list of accessories supported on ThinkCentre A58e Tower

**Memory**

1GB PC2-6400 DDR2 UDIMM	41U2977	ann 09/26/06
1GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0549	ann 03/17/09
2GB PC2-6400 DDR2 UDIMM	41U2978	ann 01/08/08
2GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0550	ann 03/17/09

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

**Storage and removable storage**

160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	ann 05/19/03
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
USB 2.0 Essential Memory Key 4GB	45J7904	ann 06/24/08
USB 2.0 Essential Memory Key 8GB	45J7905	ann 07/15/08
USB 2.0 Essential Memory Key 32GB	45K1258	ann 10/28/08
USB 2.0 Ultra Secure Memory Key 1GB	45J5915	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 2GB	45J5916	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 4GB	45J5917	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 8GB	45J5918	ann 08/26/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

**Graphics**

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
DisplayPort to VGA Monitor Cable <sup>50</sup>	57Y4393	ann 08/04/09
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
ATI™ Radeon™ HD 3470 256MB (DP, VGA)	45K1636	ann 11/18/08
NVIDIA GeForce 310 DMS59 (2-DVI, 2-VGA)	57Y4167	ann 03/02/10

<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphics card.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse <sup>52</sup>	57Y4700	ann 09/15/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Mini Optical Mouse - Black (USB)	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White (USB)	55Y9309	ann 05/19/09
Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black <sup>52</sup>	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black <sup>52</sup>	51J0198	ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones	57Y4488	ann 01/07/10
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Radial Arm	19K4464	ann 05/05/00

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on desktop accessories, please visit:

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
[www.lenovo.com/support/desktopaccessories](http://www.lenovo.com/support/desktopaccessories)  
[www.lenovo.com/support/security](http://www.lenovo.com/support/security)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre A58 Small and  
Lenovo ThinkCentre A58 Tower



Lenovo ThinkCentre A58 Small with  
Lenovo ThinkVision monitor



Lenovo ThinkCentre A58 Small



Lenovo ThinkCentre A58 Small  
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre A58 Tower

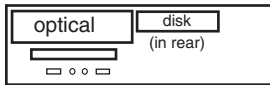


Lenovo ThinkCentre A58 Tower

# ThinkCentre® A58 Small (7522) - TopSeller - withdrawn

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Floor stand	Preload	Vista logo	Global Educ	Avail date
A58	7522-H6U	2x3	Celeron E1400	2.00	512KB	2	1GB	160GB <sup>2</sup>	DVD±RW	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-F9U	2x3	Pentium E5200	2.50	2MB	2	512MB	160GB	DVD	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-H1U	2x3	Pentium E5200	2.50	2MB	2	1GB	160GB	DVD±RW	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-D6U	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-H8U	2x3	Pentium E5200	2.50	2MB	2	3GB	250GB	DVD±RW	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-J4U	2x3	Pentium E5300	2.60	2MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro	None	Jul 09	
A58	7522-J5U	2x3	Pentium E5300	2.60	2MB	2	3GB	250GB	DVD±RW	GMA	Stand	XP Pro	None	Jul 09	
A58	7522-H2U	2x3	Core 2 Duo E7300	2.66	3MB	2	2GB	160GB	DVD±RW	GMA	Stand	XP Pro	None	Apr 09	
A58	7522-J6U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	DVD±RW	GMA	Stand	XP Pro	None	Jul 09	
A58	7522-H7U	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB	DVD±RW	GMA	Stand	Bus32	Basic	None	Apr 09


- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning	Quality, reliability, and security for small/medium businesses	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader) Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • <i>Some:</i> system floor stand for vertical orientation
Processor	<b>Intel® Celeron® Processor E1400</b> with <b>dual-core</b> , 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Processor E5200</b> or <b>E5300</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300</b> or <b>E7500</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	
Memory	<b>512MB, 1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory <i>(XP Pro models: up to 128MB [512MB models], 512MB [1GB models], 1GB [2GB or 3GB models]; Vista models: up to 765MB [2GB models]),</i> one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	
SATA disk	<b>160GB</b> or <b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable)                      - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> Supports ThinkVantage® technologies GREENGUARD® certified RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> ⇨ <b>1-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951) • <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949) • <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952) • <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950) • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953) ⇨ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ⇨ <b>Post warranty maintenance services available</b> ⇨ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 NP DDR2 UDIMM	41U2977
- <i>Some:</i> Genuine Windows Vista Business 32	2GB PC2-6400 NP DDR2 UDIMM	41U2978
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
	USB Portable Diskette Drive	05K9276
	USB 2.0 Lenovo Multimedia Headset	40Y8518
	USB 2.0 Essential Memory Key 32GB	45K1258
	USB 2.0 Portable Secure 320GB Hard Disk	43R2019
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
	ThinkVision® L2440p Wide 24" Monitor	4420HB2
	Ultrasmil Wireless Keyboard and Mouse	57Y4700
	DisplayPort to Single-link DVI-D Cable	45J7915
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985
	ATI™ Radeon™ HD 2400 XT 256MB	43R1962
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
	NVIDIA® Quadro® 256MB FX 370 LP	55Y9275
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)		
• Rescue and Recovery™		
• Password Manager		
• Lenovo Care™		
• ThinkVantage Power Manager (Vista)		
• McAfee® VirusScan® Plus (30-day)		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Small Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information  
 US models announced March 10, April 7, or June 23, 2009  
 US models withdrawn effective April, August, October, or November 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
A58	7522-M8U	2x3	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	DVD±RW	GMA	XP Pro	None	Nov 09
A58	7522-K6U	2x3	Pentium E6300	2.80	2MB	2	2GB	250GB	DVD±RW	GMA	XP Pro	None	Nov 09
A58	7522-K7U	2x3	Pentium E6300	2.80	2MB	2	3GB	320GB	DVD±RW	GMA	XP Pro	None	Nov 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Quality, reliability, and security for small/medium businesses</i></p> <p><b>Intel® Celeron® Processor E3200</b> with dual-core, Virtualization Technology, 800MHz system bus, and 1MB L2 cache or</p> <p><b>Intel Pentium® Processor E6300</b> with dual-core, Virtualization Technology, 1066MHz system bus, and 2MB L2 cache</p>		<p><b>Small</b></p>  <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, no access, std disk                  Bay ③ 3.5", .5" high, access, open (reader)</p> <p>Slot 1: Low Profile, PCI Express x16 (35w max)                  Slot 2: Low Profile, 32-bit PCI 2.3</p> <ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>															
Implementation	Processor in LGA775 socket																	
Memory	<p><b>1GB, 2GB, or 3GB std.</b> 4GB max<sup>8</sup>, <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in both sockets; no sockets avail;  <i>Non-italics:</i> standard memory in one socket; one socket available</p>																	
Graphics	<p><b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b>, integrated graphics in G41, uses main memory (up to 512MB [<i>1GB models</i>], 1GB [<i>2GB or 3GB models</i>]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter</p>																	
SATA disk	<p><b>250GB or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>																	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7																	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar																	
eSATA port	None																	
Diskette drive	None																	
Media reader	None																	
Chipset	<p><b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)</p>																	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																	
Speaker	One internal speaker for business audio																	
IEEE 1394	None																	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																	
Intel AMT	None																	
Modem	None																	
Security chip	None																	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																	
Power supply	280 watts with variable speed fan, autosensing																	
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>DisplayPort to Single-link DVI-D Cable</td> <td>45J7915</td> </tr> <tr> <td>ADD2 DVI-D Monitor Connection (HDCP)</td> <td>43R1985</td> </tr> </table> <p>More accessories on O-A58 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	DisplayPort to Single-link DVI-D Cable	45J7915	ADD2 DVI-D Monitor Connection (HDCP)	43R1985
1GB PC2-6400 DDR2 UDIMM	41U2977																	
2GB PC2-6400 DDR2 UDIMM	41U2978																	
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015																	
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990																	
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918																	
Super Multi-Burner DL DVD±RW SATA Drive	41N5620																	
DisplayPort to Single-link DVI-D Cable	45J7915																	
ADD2 DVI-D Monitor Connection (HDCP)	43R1985																	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• Lenovo Care™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Small Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																	
	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																	

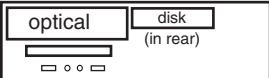
See footnotes for important warranty information  
 US models announced October 22, 2009  
 US models withdrawn effective October 2010

# ThinkCentre® A58 Small (7522) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
A58	7522-M9U	2x3	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	DVD±RW	GMA	Pro 32	None	Nov 09
A58	7522-P1U	2x3	Pentium E5300	2.60	2MB	2	2GB	250GB	DVD±RW	GMA	Pro 32	None	Nov 09
A58	7522-P2U	2x3	Pentium E5300	2.60	2MB	2	3GB	320GB	DVD±RW	GMA	Pro 32	None	Nov 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

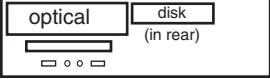
Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Celeron® Processor E3200 with dual-core,</b> Virtualization Tehnology, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5300 with dual-core,</b> 800MHz system bus, and 2MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in LGA775 socket	
Memory	<b>1GB, 2GB, or 3GB std,</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3 • Business black color; metal case • 12.5" W X 14.0" D X 3.9" H • 317mm W X 355mm D X 99mm H • 16.5 lb (7.5 kg) in maximum configuration • Toolless cover flips up and tilts backward on rear hinges • Toolless disk, optical drive removal • Toolless adapter retention • Toolless systemboard retention • System floor stand for vertical orientation
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500),</b> integrated graphics in G41, uses main memory (up to 253MB [ <i>1GB models</i> ], 765MB [ <i>2GB models</i> ], or 1277MB [ <i>3GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	
SATA disk	<b>250GB or 320GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening	<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Serial port I/O control • Parallel port I/O control • USB port disablement  Supports ThinkVantage® technologies
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	GREENGUARD® certified RoHS-compliant
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing	

Preloaded operating system <sup>20</sup>	Accessories	Limited Warranty <sup>1</sup>
- Genuine Windows® 7 Professional 32	1GB PC2-6400 DDR2 UDIMM 41U2977	<ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
<b>Preloaded applications<sup>5</sup></b> (only some listed)	2GB PC2-6400 DDR2 UDIMM 41U2978	
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	
• Password Manager	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
• ThinkVantage Power Manager	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
• ThinkVantage Toolbox	DisplayPort to Single-link DVI-D Cable 45J7915	
• Lenovo Online Data Backup	ADD2 DVI-D Monitor Connection (HDCP) 43R1985	
• Norton™ Internet Security 2009 (30 days of virus definitions)	More accessories on O-A58 sheet	
• Adobe® Reader®	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Adobe Flash® Player	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Roxio® Creator® Small Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		

See footnotes for important warranty information  
US models announced October 22, 2009  
US models withdrawn effective October 2010

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>3</sup>	SATA disk	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
A58	7705-A7U	2x3	Pentium E5200	2.50	2MB	2	2GB	160GB <sup>2</sup>	DVD	GMA	Bus32	Basic	None	Apr 09
A58	7705-A8U	2x3	Core 2 Duo E7400	2.80	3MB	2	2GB	160GB	DVD±RW	GMA	Bus32	Basic	None	Apr 09
A58	7705-A9U	2x3	Core 2 Duo E8400	3.00	6MB	2	2GB	160GB	DVD±RW	GMA	Bus32	Basic	None	Apr 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Pentium® Processor E5200 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7400 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache or <b>Intel Core 2 Duo Processor E8400 with dual-core</b> , Virtualization Technology, TXT, 1333MHz system bus, and 6MB L2 cache	<b>Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Bay ③ 3.5", .5" high, access, open (reader)
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	Slot 1: Low Profile, PCI Express x16 (35w max) Slot 2: Low Profile, 32-bit PCI 2.3
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 12.5" W X 14.0" D X 3.9" H</li> <li>• 317mm W X 355mm D X 99mm H</li> <li>• 16.5 lb (7.5 kg) in maximum configuration</li> <li>• Toolless cover flips up and tilts backward on rear hinges</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> <li>• Toolless systemboard retention</li> <li>• System floor stand for vertical orientation</li> </ul>
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 765MB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<p style="text-align: center;"><b>Supports ThinkVantage® technologies</b></p> <p style="text-align: center;"><b>GREENGUARD® certified</b> RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, autosensing	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Microsoft® Windows® Vista® Business Edition (32-bit)	1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 DisplayPort to Single-link DVI-D Cable 45J7915 ADD2 DVI-D Monitor Connection (HDCP) 43R1985 ATI™ Radeon™ HD 3470 256MB (DP, VGA) 45K1636 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced April 7, 2009  
US models withdrawn effective April 2009

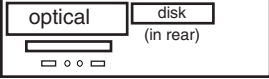


# ThinkCentre® A58 Small (7705) - TopSeller (July 2009) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Preload	Global Educ	Avail date
A58	7705-B4U	2x3	Pentium E5300	2.60	2MB	2	2GB	160GB <sup>2</sup>	DVD±RW	GMA	XP Pro	None	Jul 09
A58	7705-B3U	2x3	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	DVD±RW	GMA	XP Pro	None	Jul 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning	Quality, reliability, and security for small/medium businesses		<b>Small</b> 																																																
Processor	<b>Intel® Pentium® Processor E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache																																																		
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket																																																		
Memory	<b>2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available																																																		
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter																																																		
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in ICH7 Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																																																		
SATA controller	Two SATA cables (each 1-drop to device), two SATA connectors																																																		
SATA DVD±RW	None																																																		
SATA cables	None																																																		
eSATA port	None																																																		
Diskette drive	None																																																		
Media reader	None																																																		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)																																																		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)																																																		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)																																																		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																																																		
Speaker	One internal speaker for business audio																																																		
IEEE 1394	None																																																		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®																																																		
Intel AMT	None																																																		
Modem	None																																																		
Security chip	None																																																		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																																																		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo																																																		
Power supply	280 watts with variable speed fan, autosenesing																																																		
<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)			<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>																																																
<b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• Lenovo Care™</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Small Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																																																			
<b>Accessories</b> <table border="0"> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td><td>45J7918</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 8GB</td><td>45J7905</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Ultraslim Wireless Keyboard and Mouse</td><td>57Y4700</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington MicroSaver Cable Lock</td><td>73P2582</td></tr> <tr><td>DisplayPort to Single-link DVI-D Cable</td><td>45J7915</td></tr> <tr><td>ADD2 DVI-D Monitor Connection (HDCP)</td><td>43R1985</td></tr> <tr><td>ATI™ Radeon™ HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 3470 256MB (DP, VGA)</td><td>45K1636</td></tr> <tr><td>NVIDIA® Quadro® 256MB FX 370 LP</td><td>55Y9275</td></tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>				1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 8GB	45J7905	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Ultraslim Wireless Keyboard and Mouse	57Y4700	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington MicroSaver Cable Lock	73P2582	DisplayPort to Single-link DVI-D Cable	45J7915	ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ATI™ Radeon™ HD 2400 XT 256MB	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® Quadro® 256MB FX 370 LP	55Y9275
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<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																			
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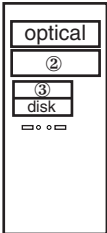
See footnotes for important warranty information  
 US models announced July 7, 2009  
 US models withdrawn effective November 2009

# ThinkCentre® A58 Tower (7515) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Vista logo	Global Educ	Avail date
A58	7515-J3U	4x4	Celeron E1400	2.00	512KB	2	1GB	160GB <sup>2</sup>	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
A58	7515-H4U	4x4	Pentium E5200	2.50	2MB	2	512MB	160GB	None	DVD	GMA	XP Pro	None	None	Apr 09
A58	7515-H5U	4x4	Pentium E5200	2.50	2MB	2	1GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
A58	7515-D9U	4x4	Pentium E5200	2.50	2MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
A58	7515-J5U	4x4	Pentium E5200	2.50	2MB	2	3GB	250GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
A58	7515-J8U	4x4	Pentium E5300	2.60	2MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Jul 09
A58	7515-J9U	4x4	Pentium E5300	2.60	2MB	2	3GB	250GB	None	DVD±RW	GMA	XP Pro	None	None	Jul 09
A58	7515-A4U	4x4	Core 2 Duo E7300	2.66	3MB	2	2GB	160GB	None	DVD±RW	GMA	XP Pro	None	None	Apr 09
A58	7515-K1U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	None	None	Jul 09
A58	7515-J4U	4x4	Pentium E5200	2.50	2MB	2	2GB	160GB	None	DVD±RW	GMA	Bus32	Basic	None	Apr 09
A58	7515-J2U	4x4	Pentium E5200	2.50	2MB	2	3GB	160GB	None	DVD	GMA	Bus32	Basic	None	Apr 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Celeron® Processor E1400 with dual-core</b> , 800MHz system bus, and 512KB L2 cache or <b>Intel Pentium® Processor E5200 or E5300 with dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7300 or E7500 with dual-core</b> , 1066MHz system bus, and 3MB L2 cache	<b>Tower</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> </ul>	
Memory	<b>512MB, 1GB, 2GB, or 3GB std.</b> , 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory ( <i>XP Pro models:</i> up to 128MB [ <i>512MB models,</i> 512MB [ <i>1GB models,</i> 1GB [ <i>2GB or 3GB models;</i> Vista models: up to 765MB [ <i>2GB model,</i> 1277MB [ <i>3GB model,</i> one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<p>Bay ① 5.25", 1.6" high, access, std optical            Bay ② 5.25", 1.6" high, access, open            Bay ③ 3.5", 1" high, access, open (reader/diskette)            Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCI Express x16 (75w max)            Slot 2: half-length, full-height, PCI Express x1            Slot 3: half-length, full-height, 32-bit PCI 2.3            Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service®</li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		

Preloaded operating system <sup>20</sup>	Accessories	
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 NP DDR2 UDIMM	41U2977
- <i>Some:</i> Genuine Windows Vista Business 32	2GB PC2-6400 NP DDR2 UDIMM	41U2978
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918
	USB 2.0 Lenovo Multimedia Headset	40Y8518
	USB 2.0 Essential Memory Key 32GB	45K1258
	USB 2.0 Portable Secure 320GB Hard Disk	43R2019
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
	Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675
	ThinkVision® L2440p Wide 24" Monitor	4420HB2
	DisplayPort to Single-link DVI-D Cable	45J7915
	ADD2 DVI-D Monitor Connection (HDCP)	43R1985
	ATI™ Radeon™ HD 2400 XT 256MB	43R1962
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
 US models announced March 10, April 7, or June 23, 2009  
 US models withdrawn effective April, August, October, or November 2009

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
A58	7515-L2U	4x4	Celeron E3200	2.40	1MB	2	1GB	250GB <sup>2</sup>	None	DVD±RW	GMA	XP Pro	None	Nov 09
A58	7515-K5U	4x4	Pentium E6300	2.80	2MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	None	Nov 09
A58	7515-K6U	4x4	Pentium E6300	2.80	2MB	2	3GB	320GB	None	DVD±RW	GMA	XP Pro	None	Nov 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	Quality, reliability, and security for small/medium businesses				<b>Tower</b>					
Implementation	<b>Intel® Celeron® Processor E3200 with dual-core,</b> Virtualization Tehnology, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E6300 with dual-core,</b> Virtualization Technology, 1066MHz system bus, and 2MB L2 cache Processor in LGA775 socket				<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Memory	<b>1GB, 2GB, or 3GB std,</b> 4GB max <sup>8</sup> , <b>PC2-6400 800MHz DDR2,</b> non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available				Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk					
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500),</b> integrated graphics in G41, uses main memory (up to 512MB [1GB models], 1GB [2GB or 3GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter				Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3					
SATA disk	<b>250GB or 320GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening SATA controller Serial ATA, SATA 3.0Gb/s, integrated in ICH7 SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors eSATA port None Diskette drive None Media reader None				<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>					
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)				Supports ThinkVantage® technologies					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				<b>GREENGUARD® certified</b> RoHS-compliant  <b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)									
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)									
Audio	High Definition (HD) Audio, Realtek® ALC662 codec									
Speaker	One internal speaker for business audio									
IEEE 1394	None									
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®									
Intel AMT	None									
Modem	None									
Security chip	None									
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo				Keyboard Mouse Power supply					
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo									
Power supply	280 watts with variable speed fan, manual switch				Preloaded operating system <sup>20</sup> <ul style="list-style-type: none"> <li>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional</li> </ul>					
	<b>Preloaded applications<sup>5</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Password Manager</li> <li>• Lenovo Care™</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Windows Live™ Toolbar</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Small Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>				<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675</li> <li>DisplayPort to Single-link DVI-D Cable 45J7915</li> <li>ADD2 DVI-D Monitor Connection (HDCP) 43R1985</li> <li>ATI™ Radeon™ HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>More accessories on O-A58 sheet</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>					

See footnotes for important warranty information  
 US models announced October 22, 2009  
 US models withdrawn effective January 2010

# ThinkCentre® A58 Tower (7611) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Preload	Global Educ	Avail date
A58	7611-D5U	4x4	Pentium E5300	2.60	2MB	2	2GB	160GB <sup>2</sup>	None	DVD±RW	GMA	XP Pro	None	Jul 09
A58	7611-D4U	4x4	Core 2 Duo E7500	2.93	3MB	2	2GB	250GB	None	DVD±RW	GMA	XP Pro	None	Jul 09

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache		<b>Tower</b>	
Implementation	Processor in FC-LGA6 or FC-LGA8 package in LGA775 socket		<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.7 lb (11.2 kg) in max configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>2GB std, 4GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; one socket available		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 1GB), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter		<ul style="list-style-type: none"> <li>Slot 1: half-length, full-height, PCI Express x16 (75w max)</li> <li>Slot 2: half-length, full-height, PCI Express x1</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> </ul>	
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
eSATA port	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
IEEE 1394	None			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®			
Intel AMT	None			
Modem	None			
Security chip	None			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ 3-year parts and labor</li> <li>⇒ International Warranty Service<sup>9</sup></li> <li>⇒ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇒ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>⇒ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇒ Post warranty maintenance services available</li> <li>⇒ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 NP DDR2 UDIMM 41U2977			
<b>Preloaded applications<sup>5</sup></b>	2GB PC2-6400 NP DDR2 UDIMM 41U2978			
• Rescue and Recovery™	160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254			
• Password Manager	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015			
• Lenovo Care™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990			
• ThinkVantage System Update	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918			
• McAfee® VirusScan® Plus (30 days of virus definitions)	USB 2.0 Lenovo Multimedia Headset 40Y8518			
• Lenovo System Toolbox	USB 2.0 Lenovo Webcam 40Y8519			
• Adobe® Reader	USB 2.0 Essential Memory Key 8GB 45J7905			
• Windows Live™ Toolbar	USB 2.0 Essential Memory Key 32GB 45K1258			
• Microsoft® Office 2007 Trial (60-day)	USB 2.0 Portable Secure 320GB Hard Disk 43R2019			
• Roxio® Creator® Small Business Edition (DVD±RW)	Super Multi-Burner DL DVD±RW SATA Drive 41N5620			
• Roxio MyDVD® (DVD±RW)	Blu-ray™ Burner SATA 1.5Gb/s Drive 45K1675			
• Corel® WinDVD® (DVD±RW)	ThinkVision® L1940p Wide 19" Monitor 4424HB6			
	ThinkVision L2240p Wide 22" Monitor 4422HB6			
	ThinkVision L2440p Wide 24" Monitor 4420HB2			
	Ultraslim Wireless Keyboard and Mouse 57Y4700			
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074			
	Kensington MicroSaver Cable Lock 73P2582			
	DisplayPort to Single-link DVI-D Cable 45J7915			
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985			
	ATI™ Radeon™ HD 2400 XT 256MB 43R1962			
	ATI Radeon HD 3470 256MB (DP, VGA) 45K1636			
	NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635			
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
	GREENGUARD® certified RoHS-compliant			

See footnotes for important warranty information  
 US models announced July 7, 2009  
 US models withdrawn effective November 2009

Partial list of accessories supported on ThinkCentre A58

**Memory**

1GB PC2-6400 DDR2 UDIMM	41U2977	ann 09/26/06
1GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0549	ann 03/17/09
2GB PC2-6400 DDR2 UDIMM	41U2978	ann 01/08/08
2GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0550	ann 03/17/09

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

All:

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

Tower 7515/7611 supports:

Blu-ray™ Burner SATA 1.5Gb/s Drive	45K1675	ann 03/31/09
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**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

**Graphics**

Small 7522/7705 support Low Profile 35 watts max:

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA® GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

Tower 7515/7611 supports 75 watts max:

DisplayPort to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
ADD2 DVI-D Monitor Connection (HDCP)	43R1985	ann 11/06/07
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10

<sup>50</sup>Attaches to the ThinkCentre compatible DisplayPort graphics card.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse <sup>52</sup>	57Y4700	ann 09/15/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup>Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black <sup>52</sup>	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black <sup>52</sup>	51J0198	ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones	57Y4488	ann 01/07/10
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**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup>Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on desktop accessories, please visit:

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
[www.lenovo.com/support/desktopaccessories](http://www.lenovo.com/support/desktopaccessories)  
[www.lenovo.com/support/security](http://www.lenovo.com/support/security)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

# ThinkCentre® A60 Desktop (9266) - withdrawn

Personal Systems Reference (PSREF)

Name	Type	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Global	Avail date
A60	9266-A4U	4x3	Sempron 3000+	1.6	256KB	Single	512MB		80GB <sup>2</sup>	CD	NVIDIA	XP Pro	1-yr	None	Aug 06
A60	9266-B6U	4x3	Sempron 3400+	1.8	256KB	Single	512MB	9-in-1	80GB	CD	NVIDIA	XP Pro	1-yr	None	Aug 06
A60	9266-36U	4x3	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	Combo	NVIDIA	XP Pro	1-yr	None	Aug 06
A60	9266-37U	4x3	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	CD	NVIDIA	XP Pro	1-yr	None	Aug 06
A60	9266-D1U	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	CD	NVIDIA	XP Pro	1-yr	None	Aug 06
A60	9266-D2U	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	Combo	NVIDIA	XP Pro	1-yr	None	Aug 06

**• These models have a 1-year limited warranty<sup>1</sup>**

Positioning	<b>Mainstream enterprise stability and manageability</b> <b>AMD® Sempron™ 3000+</b> or <b>3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 X2 3800+</b> or <b>4200+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2	Processor	<b>Desktop</b>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3"W X 15.94"D X 4.13"H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> Bay ① 5.25", 1.6" high, access, standard optical Bay ② 3.5", 1" high, access, optional diskette Bay ③ 3.5", 1" high, no access, standard disk  Slot 1: Low Profile, PCI Express x16 (25w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 (5v) Slot 4: Low Profile, 32-bit PCI 2.3 (5v)
Implementation			
Memory - std/max <sup>5</sup>			
Memory			
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors		<b>SECURITY</b>  <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                          - Padlock loop (in rear for opt padlock)                          - Security slot (in rear for optional Kensington Microsaver cable)                          - No keylock</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul>
SATA disk	<b>80GB</b> / SATA300 7200 rpm / vibration dampening Serial ATA / 300MB/sec SATA300 / integrated in south bridge SATA cables (one SATA cable (one 1-drop to disk) / two SATA planar connectors)		
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge SATA cables (one 1-drop to disk) / two SATA planar connectors EIDE CD Some: 48X-20X <sup>4</sup> CD-ROM EIDE Combo Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo EIDE controller Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge EIDE cables One 1-drop EIDE 80-conductor cable to optical / two planar connectors Diskette drive None / use optional external USB-based diskette drive Media reader Some: 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0		
EIDE CD			
EIDE Combo			
EIDE controller			
EIDE cables			
Diskette drive			
Media reader			
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software		
Speaker	One internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®		
Modem	None		
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo		
Power supply	220 watts with variable speed fan / universal / manual switch		
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>		<b>LIMITED WARRANTY<sup>1</sup></b>  <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post-warranty maintenance services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> via 800-IBM-SERV (426-7378)</b></li> </ul>
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	
- Disk-to-Disk Recovery (in hidden protected area)	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
<b>Preloaded</b>	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
• Rescue and Recovery™	250GB Serial ATA300 Disk (7200 rpm)	41N3015	
• Client Security Solution™	500GB Serial ATA300 Disk (7200 rpm)	43R1990	
• ThinkVantage Productivity Center	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk)	73P3300	
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	
• System Migration Assistant	USB Portable Diskette Drive	05K9276	
• Symantec® Client Security™	USB Fingerprint Reader	41U3167	
• Diskkeeper® Lite	USB 2.0 Lenovo Multimedia Headset	40Y8518	
• PC-Doctor™ (diagnostics)	USB 2.0 Webcam	40Y8519	
• Adobe® Reader	USB 2.0 Essential Memory Key 2GB	41U4944	
• Google Toolbar	USB 2.0 Security Memory Key 4GB	41U5120	
• Google Desktop	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	
• Picasa from Google	USB 2.0 Portable 120GB Hard Disk	41N8379	
• Multimedia Center for Think Offerings (combo)	USB 2.0 Super Multi-Burner Drive	41N5565	
• Sonic RecordNow and Drive Letter Access (combo)	ThinkVision® L190x 19" LCD Monitor	4439HB2	
• InterVideo WinDVD (combo)	ThinkVision L193p 19" LCD Monitor	4431HB2	
<b>License</b> - CD not included	ThinkVision L194 Wide 19" LCD Monitor	4434HB6	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	
	Lenovo Laser Mouse (USB, PS/2)	41U3074	
	Lenovo M500 Projector	0037A05	
	Enh Perf Wireless Keyboard and Mouse	73P4067	
	Preferred Pro USB Fingerprint Keyboard	73P4730	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

See footnotes for important warranty information  
 US models announced August 8 or August 22, 2006  
 US models withdrawn effective June or August 2007, or January 2008

# ThinkCentre® A60 Desktop (9384) - withdrawn

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>a</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A60	9384-A7U	4x3	Sempron 3000+	1.6	256KB	Single	512MB		80GB <sup>2</sup>	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-B3U	4x3	Sempron 3400+	1.8	256KB	Single	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-20U	4x3	Athlon 64 3500+	2.2	512KB	Single	512MB		80GB	CD	NVIDIA	XP Pro	3-yr	Educ	Nov 06
A60	9384-23U	4x3	Athlon 64 3500+	2.2	512KB	Single	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-28U	4x3	Athlon 64 3500+	2.2	512KB	Single	512MB		160GB	Combo	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-37U	4x3	Athlon 64 3800+	2.4	512KB	Single	1GB		160GB	DVD±RW	NVIDIA	XP Pro	3-yr	Educ	Nov 06
A60	9384-34U	4x3	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr	W Gbl	Aug 06
A60	9384-35U	4x3	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	Combo	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-D3U	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-D5U	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	9-in-1	160GB	Combo	NVIDIA	XP Pro	3-yr	Global	Aug 06
A60	9384-D7U	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9384-F9U	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr		May 07
A60	9384-FCU	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB		160GB	Combo	NVIDIA	XP Pro	3-yr		May 07

• **These models have a 3-year limited warranty<sup>1</sup>**

<p>Positioning Processor: <b>Mainstream enterprise stability and manageability</b>  <b>AMD® Sempron™ 3000+ or 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or  <b>AMD Athlon™ 64 3500+ or 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or  <b>AMD Athlon™ 64 X2 3800+, 4200+, 4400+, or 4800+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology</p> <p>Implementation Processor in 940-pin PGA package in Socket AM2</p> <p>Memory - std/max<sup>a</sup>: <b>512MB or 1GB std / 4GB max</b>                  Memory Two 240-pin DIMM sockets / one socket used /                  Others: <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable                  Fxx: <b>PC2-5300 667MHz DDR2</b> / non-parity / CAS latency 5 (CL5) / unbuffered / dual-channel capable</p> <p>Graphics <b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors</p> <p>SATA disk <b>80GB or 160GB</b> / SATA300 7200 rpm / vibration dampening                  SATA controller Serial ATA / 300MB/sec SATA300 / integrated in south bridge                  SATA cables One SATA cable (one 1-drop to disk) / two SATA planar connectors                  EIDE CD Some: 48X-20X<sup>4</sup> CD-ROM                  EIDE DVD Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer                  EIDE Combo Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo                  EIDE DVD±RW Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)                  EIDE controller Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge                  EIDE cables One 1-drop EIDE 80-conductor cable to optical / two planar connectors                  Diskette drive None / use optional external USB-based diskette drive                  Media reader Some: 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0</p> <p>Chipset <b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O</p> <p>Front ports Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)                  Rear ports Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)                  Rear audio ports Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)                  Audio High Definition (HD) Audio / AD1986A codec / SoundMAX® software                  Speaker One internal speaker for business audio                  IEEEE 1394 None                  Ethernet Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN<sup>b</sup></p> <p>Keyboard Others: 104-key Preferred Pro Full-size keyboard (PS/2 connector)                  Fxx: Preferred Pro USB Keyboard (USB connector), 104-key                  Mouse Optical Wheel Mouse (USB only), black, Lenovo logo                  Power supply 220 watts with variable speed fan / universal / manual switch</p>	<p><b>Desktop</b></p> <p>• Business black color                  • 13.3"W X 15.94"D X 4.13"H                  • 331mm W X 405mm D X 105mm H                  • 18.5 to 20.7lb (8.4 to 9.4kg)                  • Toolless cover removal                  • Toolless disk, diskette drive, optical drive removal                  • Toolless adapter retention</p> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, access, std or opt reader                  Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x16 (25w max)                  Slot 2: Low Profile, PCI Express x1                  Slot 3: Low Profile, 32-bit PCI 2.3 (5v)                  Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p>	<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington Microsaver cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> </ul>																										
<p><b>Preload with Windows XP Professional<sup>5</sup></b>                  Microsoft® Windows® XP Professional</p> <p><b>Preloaded</b> (only some listed)                  • Education models: VitalSource Library education software                  • Education models: Adobe® Photoshop® Elements plus Adobe Premiere® Elements                  • Multimedia Center for Think Offerings (combo, DVD)                  • Sonic RecordNow and Drive Letter Access (combo)                  • InterVideo WinDVD (combo, DVD)</p> <p><b>CD</b>                  • Education models: Adobe Photoshop Elements plus Adobe Premiere Element</p>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>512MB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4983</td> </tr> <tr> <td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>250GB Serial ATA300 Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB Serial ATA300 Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>48X/32X/48X/16X Max<sup>11</sup> Combo drive (blk)</td> <td>73P3300</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW EIDE Drive</td> <td>41N5581</td> </tr> <tr> <td>USB 2.0 Security Memory Key 4GB</td> <td>41U5120</td> </tr> <tr> <td>USB 2.0 CD-RW/DVD-ROM Combo II Drive</td> <td>40Y8637</td> </tr> <tr> <td>USB 2.0 Super Multi-Burner Drive</td> <td>41N5565</td> </tr> <tr> <td>ThinkVision® L194 Wide 19" LCD Monitor</td> <td>4434HB6</td> </tr> <tr> <td>ThinkVision L220x Wide 22" LCD Monitor</td> <td>4433HB2</td> </tr> <tr> <td>Preferred Pro USB FingerPrint Keyboard</td> <td>73P4730</td> </tr> </table> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	250GB Serial ATA300 Disk (7200 rpm)	41N3015	500GB Serial ATA300 Disk (7200 rpm)	43R1990	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk)	73P3300	Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	USB 2.0 Super Multi-Burner Drive	41N5565	ThinkVision® L194 Wide 19" LCD Monitor	4434HB6	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	Preferred Pro USB FingerPrint Keyboard	73P4730	<p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p> <p><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</li> </ul>
512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983																											
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500GB Serial ATA300 Disk (7200 rpm)	43R1990																											
48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk)	73P3300																											
Super Multi-Burner DL DVD±RW EIDE Drive	41N5581																											
USB 2.0 Security Memory Key 4GB	41U5120																											
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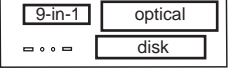
See footnotes for important warranty information  
 US models announced Aug 8, Aug 22, or Nov 21, 2006, or May 1, 2007  
 US models withdrawn effective June or August 2007, or January 2008

# ThinkCentre® A60 Desktop (9384) - June 2007 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Preload	Educ load	Limited warranty <sup>1</sup>	Workhorse Global	Avail date
A60	9384-FEU	4x3	Sempron 3400+	1.8	256KB	Single	512MB	None	80GB <sup>2</sup>	DVD	NVIDIA	XP Pro	K12	3-yr	No	Jun 07
A60	9384-FFU	4x3	Sempron 3400+	1.8	256KB	Single	512MB	None	80GB	DVD	NVIDIA	XP Pro	HE	3-yr	No	Jun 07

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Sempron™ 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller Processor in 940-pin PGA package in Socket AM2										<b>Desktop</b>					
Implementation											 <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3"W X 15.94"D X 4.13"H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>					
Memory - std/max <sup>8</sup>	<b>512MB std</b> / 4GB max										Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, std or opt reader Bay ③ 3.5", 1" high, no access, std disk					
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-5300 667MHz DDR2</b> / non-parity / CAS latency 5 (CL5) / unbuffered / dual-channel capable										Slot 1: Low Profile, PCI Express x16 (25w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 (5v) Slot 4: Low Profile, 32-bit PCI 2.3 (5v)					
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors															
SATA disk	<b>80GB</b> , SATA300 7200 rpm, vibration dampening										<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul>					
SATA controller	Serial ATA, 300MB/sec SATA300, integrated in south bridge															
SATA cables	One SATA cable (one 1-drop to disk), two SATA planar connectors															
EIDE DVD	16X-48X Max <sup>4</sup> DVD-ROM, single-layer															
EIDE controller	Enhanced IDE, ATA-133, integrated in NVIDIA MCP51 south bridge															
EIDE cables	One 1-drop EIDE 80-conductor cable to optical, 2 planar connectors															
Diskette drive	None (use optional external USB-based diskette drive)															
Media reader	None															
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O															
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)															
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)															
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)															
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software															
Speaker	External 2-piece speakers, 6 watts (3 watts each), black, Infinity logo															
IEEE 1394	None															
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®															
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key															
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo															
Power supply	220 watts with variable speed fan / universal / manual switch															
<b>Preload with Windows XP Professional<sup>5</sup></b>	<b>Accessories</b>										ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>					
Microsoft® Windows® XP Professional	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983										<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service®</li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</li> </ul>					
<b>Preloaded</b> (only some listed)	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984															
• <i>Some (K12):</i> K-12 education software	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985															
- VitalSource Library School Edition	160GB Serial ATA300 Disk (7200 rpm) 09N4254															
- Adobe® Instructor Resource Center	250GB Serial ATA300 Disk (7200 rpm) 41N3015															
- Adobe Digital School Collection	500GB Serial ATA300 Disk (7200 rpm) 43R1990															
- Photoshop Elements 5 (and CD)	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300															
- Premier Elements 3 (and DVD)	Super Multi-Burner DL DVD±RW EIDE Drive 41N5581															
- Acrobat 8 Professional (and CD)	USB Portable Diskette Drive 05K9276															
- Contribute 4 (and CD)	USB 2.0 Lenovo Multimedia Headset 40Y8518															
• <i>Some (HE):</i> Higher education software	USB 2.0 Lenovo Webcam 40Y8519															
- VitalSource Library College Edition	USB 2.0 Essential Memory Key 2GB 41U4944															
- Adobe® Instructor Resource Center	USB 2.0 Security Memory Key 1GB 41U5118															
- Adobe Photoshop Elements 5 (and CD)	USB 2.0 Security Memory Key 2GB 41U5119															
- Adobe Premier Elements 3 (and DVD)	USB 2.0 Security Memory Key 4GB 41U5120															
• Rescue and Recovery™	USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637															
• Client Security Solution™	USB 2.0 Portable 120GB Hard Disk 41N8379															
• ThinkVantage Productivity Center	USB 2.0 Super Multi-Burner Drive 41N5565															
• ThinkVantage System Update	ThinkVision® L151 15" LCD Monitor 9165AC6															
• System Migration Assistant	ThinkVision L171p 17" LCD Monitor 9417HC2															
• Symantec® Client Security™	ThinkVision L190x 19" LCD Monitor 4439HB2															
• Diskeeper® Lite	ThinkVision L193p 19" LCD Monitor 4431HB2															
• PC-Doctor™ (diagnostics)	ThinkVision L194 Wide 19" LCD Monitor 4434HB6															
• Windows Live™ Toolbar	ThinkVision L220x Wide 22" LCD Monitor 4433HB2															
• Windows Live Search	Lenovo Laser Mouse (USB, PS/2) 41U3074															
• Picasa from Google	Lenovo M500 Projector 0037A05															
• Multimedia Center for Think Offerings (DVD)	Kensington® Cable Lock from Lenovo 73P2582															
<b>License</b> - CD not included	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>															
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>															

See footnotes for important warranty information  
 US models announced June 5, 2007  
 US models withdrawn effective January 2008

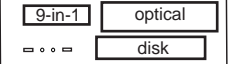


# ThinkCentre® A60 Desktop (9384) - Vista™ - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>6</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Int or ext speaker	Vista preload	Workhorse Gbl, Educ	Avail date
A60	9384-FGU	4x3	Sempron 3400+	1.8	256KB	Single	512MB		80GB <sup>2</sup>	DVD	NVIDIA	Ext Spks	Business	HE	Jun 07
A60	9384-FHU	4x3	Sempron 3400+	1.8	256KB	Single	512MB		80GB	DVD	NVIDIA	Ext Spks	Business	K12	Jun 07
A60	9384-2BU	4x3	Athlon 64 3500+	2.2	512KB	Single	1GB		160GB	Combo	NVIDIA	Internal	Business		Feb 07
A60	9384-3AU	4x3	Athlon 64 X2 3800+	2.0	2x512KB	Dual	1GB		80GB	DVD	NVIDIA	Internal	Business	W Gbl	Feb 07
A60	9384-DAU	4x3	Athlon 64 X2 4200+	2.2	2x512KB	Dual	1GB	9-in-1	160GB	Combo	NVIDIA	Internal	Business	Gbl	Feb 07
A60	9384-FAU	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB		80GB	DVD	NVIDIA	Internal	Business		May 07
A60	9384-FBU	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB		160GB	Combo	NVIDIA	Internal	Business		May 07

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Sempron™ 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3500+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+, 4200+, 4400+, or 4800+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology	<b>Desktop</b>
Implementation	Processor in 940-pin PGA package in Socket AM2	 <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.3"W X 15.94"D X 4.13"H</li> <li>• 331mm W X 405mm D X 105mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>
Memory	<b>512MB or 1GB std</b> / 4GB max / two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available; <i>3AU/DAU:</i> <b>PC2-4200 533MHz DDR2</b> , non-parity, CAS latency 4 (CL4), unbuffered, dual-channel capable; <i>2BU/Fxx:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, CAS latency 5 (CL5), unbuffered, dual-channel capable	<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, std or opt reader</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> </ul> <p>Slot 1: Low Profile, PCI Express x16 (25w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, 32-bit PCI 2.3 (5v) Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p>
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors	<p style="text-align: center;"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington Microsaver cable)</li> </ul> </li> <li>- No keylock</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> </ul> <p>ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a></p> <p style="text-align: center;"><b>LIMITED WARRANTY<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</b></li> </ul>
SATA disk	<b>80GB or 160GB</b> / SATA300 7200 rpm / vibration dampening	
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge	
EIDE cables	One 1-drop EIDE 80-conductor cable to optical / two planar connectors	
Diskette drive	None / use optional external USB-based diskette drive	
Media reader	<i>Some:</i> 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0	
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)	
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software	
Speaker	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo <i>Some:</i> [Internal] one internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®	
Modem	None	
Keyboard	<i>Feb models:</i> 104-key Preferred Pro Full-size keyboard (PS/2 connector) <i>May/Jun models:</i> Preferred Pro USB Keyboard (USB connector), 104-key	
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo	
Power supply	220 watts with variable speed fan / universal / manual switch	
<b>Preloaded operating system<sup>20</sup></b> <ul style="list-style-type: none"> <li>- Microsoft® Windows® Vista Business Edition (32-bit)</li> <li>◇ <i>FGU/FHU:</i> Vista Basic logo</li> <li>◇ <i>Others:</i> Vista Premium logo</li> </ul> <b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• <i>Some (K12):</i> K-12 education software <ul style="list-style-type: none"> <li>- VitalSource Library School Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Digital School Collection <ul style="list-style-type: none"> <li>- Photoshop Elements 5 (and CD)</li> <li>- Premier Elements 3 (and DVD)</li> <li>- Acrobat 8 Professional (and CD)</li> <li>- Contribute 4 (and CD)</li> </ul> </li> </ul> </li> <li>• <i>Some (HE):</i> Higher education software <ul style="list-style-type: none"> <li>- VitalSource Library College Edition</li> <li>- Adobe® Instructor Resource Center</li> <li>- Adobe Photoshop Elements 5 (and CD)</li> <li>- Adobe Premier Elements 3 (and DVD)</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Lenovo Multimedia Center</li> <li>• Norton Internet Security™ (90 days of virus definitions) <ul style="list-style-type: none"> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> </ul> </li> <li>• License - CD not included <ul style="list-style-type: none"> <li>- Lotus® Notes® Stand-alone Client</li> </ul> </li> </ul>		

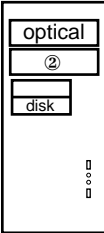
See footnotes for important warranty information  
US models announced January 30, May 1, or June 5, 2007  
US models withdrawn effective August 2007 or January 2008

# ThinkCentre® A60 Tower (8700) - TopSeller - withdrawn

Created by Lenovo Training Solutions  
Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	EIDE optical	Integrated graphics	Modem adapter	Preload	Limited warranty <sup>1</sup>	Avail date
A60	8700-A1U	4x4	Sempron® 3000+	1.6	256KB	Single	256MB	80GB <sup>2</sup>	CD	NVIDIA	None	XP Home <sup>5</sup>	1-yr	Aug 06
A60	8700-A2U	4x4	Sempron 3000+	1.6	256KB	Single	512MB	80GB	CD	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-25U	4x4	Athlon® 64 3500+	2.2	512KB	Single	512MB	80GB	CD	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-27U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	80GB	Combo	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-28U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	160GB	DVD±RW	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-D1U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	80GB	CD	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-D2U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	80GB	Combo	NVIDIA	None	XP Pro	1-yr	Aug 06
A60	8700-D3U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	160GB	DVD±RW	NVIDIA	None	XP Pro	1-yr	Aug 06

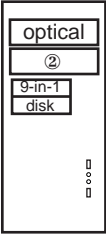
- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning	<b>Mainstream enterprise stability and manageability</b>		
Processor	<b>AMD® Sempron 3000+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon 64 3500+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4200+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2		
Implementation	<b>Memory - std/max<sup>6</sup> 256MB or 512MB std / 4GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, optional diskette Bay ④ 3.5", 1" high, no access, standard disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)
Memory	<b>Graphics NVIDIA® GF 6100 / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors</b>		
SATA disk	<b>80 or 160GB / SATA300 7200 rpm / vibration dampening</b> Serial ATA / 300MB/sec SATA300 / integrated in south bridge SATA controller SATA cables SATA controller EIDE CD EIDE Combo EIDE DVD±RW EIDE controller EIDE cables Diskette drive		<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul> ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
EIDE CD	<b>Chipset NVIDIA GeForce® 6100 C51g chipset / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O</b>		
Front ports	Two USB (Version 2.0), microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Rear ports Four USB (Version 2.0), one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Rear audio ports Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm) Audio High Definition (HD) Audio / AD1986A codec / SoundMAX® software Speaker One internal speaker for business audio Ethernet Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN® Modem None		<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></li> </ul>
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo Mouse Optical Wheel Mouse (USB only), 400 dpi, black, Lenovo logo Power supply 280 watts with variable speed fan / manual switch		
Preload with Windows XP Home <sup>5</sup>	<b>Accessories</b> Microsoft® Windows® XP Home Edition 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 Preload with Windows XP Professional <sup>5</sup> 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 Microsoft Windows XP Professional 250GB Serial ATA300 Disk (7200 rpm) 41N3015 Preloaded (all; only some listed) 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW Drive 41N5581 USB Fingerprint Reader 41U3167 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 80GB Hard Disk 41N8378 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 Lenovo L191 19" Monitor (black) 6135AB1 Lenovo L192 Wide 19" Monitor (black) 6920AB1 ThinkVision® L201p 20.1" Monitor (black) 9220HB1 Lenovo M500 Projector 0037A05 Enh Perf Wireless Keyboard and Mouse 73P4067 ATI® Radeon™ X300 SE 128MB Dual Head 41U4813 ATI X1300 256MB Dual Head/TV-out 41U5028 ATI X1600 Pro 256MB VGA/DVI-I/TV-out 41A4073 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
License - CD not included	- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)		

See footnotes for important warranty information  
US models announced August 8, 2006  
US models withdrawn effective June or August 2007

Name	Type-model	Slot x bay	AMD processor	L2 cache	GHz	Core	Memory <sup>a</sup>	SATA disk	Media reader	EIDE optical	Integrated graphics	Modem adapter	Int or ext speaker	Preload	Avail date
A60	8700-B2U	4x4	Sempron 3400+	1.8	256KB	Single	512MB	80GB <sup>2</sup>	9-in-1	Combo	NVIDIA	Modem	Ext spks	XP Home	Aug 06
A60	8700-41U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB	80GB		CD	NVIDIA		Internal	XP Pro	Aug 06
A60	8700-42U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB	80GB		Combo	NVIDIA		Internal	XP Pro	Aug 06
A60	8700-43U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB	160GB	9-in-1	Combo	NVIDIA	Modem	Ext spks	XP Home	Aug 06
A60	8700-44U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	1GB	160GB		DVD±RW	NVIDIA		Internal	XP Pro	Aug 06
A60	8700-D5U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	1GB	250GB	9-in-1	DVD±RW	NVIDIA	Modem	Ext spks	XP Home	Aug 06
A60	8700-D7U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	1GB	160GB		DVD±RW	NVIDIA		Internal	XP Pro	Aug 06

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	Mainstream enterprise stability and manageability <b>AMD® Sempron™ 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 X2 3800+</b> or <b>4200+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology			<b>Tower</b>							
Implementation	Processor in 940-pin PGA package in Socket AM2			<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>							
Memory - std/max <sup>a</sup>	<b>512MB</b> or <b>1GB std</b> / 4GB max			Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt reader Bay ④ 3.5", 1" high, no access, standard disk							
Memory	Two 240-pin DIMM sockets / models 44U, D5U, D7U: two sockets used (512MB per socket); other models: one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable			Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)							
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors			<p><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>							
SATA disk	<b>80, 160,</b> or <b>250GB</b> / SATA300 7200 rpm / vibration damping										
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge										
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors										
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM										
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo										
EIDE DVD±RW	Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)										
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge										
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors										
Diskette drive	None / use optional external USB-based diskette drive										
Media Reader	Some: 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0										
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O										
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)										
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)										
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)										
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software										
Speaker	Some: [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo Some: [Internal] one internal speaker for business audio										
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®										
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter						ThinkCentre desktops implement ThinkVantage® technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>				
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo										
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo										
Power supply	280 watts with variable speed fan / manual switch										
<b>Preload with Windows XP Home<sup>5</sup></b>											
Microsoft® Windows® XP Home Edition	512MB PC2-5300 CL5 NP DDR2 UDIMM			73P4983							
<b>Preload with Windows XP Professional<sup>5</sup></b>	1GB PC2-5300 CL5 NP DDR2 UDIMM			73P4984							
Microsoft Windows XP Professional	2GB PC2-5300 CL5 NP DDR2 UDIMM			73P4985							
<b>Preloaded</b> (all OSes; only some listed)	250GB Serial ATA300 Disk (7200 rpm)			41N3015							
• Rescue and Recovery™	500GB Serial ATA300 Disk (7200 rpm)			43R1990							
• Client Security Solution™	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk)			73P3300							
• ThinkVantage System Update	Super Multi-Burner DL DVD±RW EIDE Drive			41N5581							
• System Migration Assistant	USB Portable Diskette Drive			05K9276							
• Symantec® Client Security™	USB 2.0 Lenovo Multimedia Headset			40Y8518							
• Google Desktop	USB 2.0 Lenovo Webcam			40Y8519							
• Picasa from Google	USB 2.0 Essential Memory Key 2GB			41U4944							
• Multimedia Center for Think Offerings (combo, DVD±RW)	USB 2.0 Security Memory Key 4GB			41U5120							
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	USB 2.0 CD-RW/DVD-ROM Combo II Drive			40Y8637							
• InterVideo WinDVD (combo, DVD±RW)	USB 2.0 Super Multi-Burner Drive			41N5565							
<b>License</b> - CD not included	ThinkVision® L193p 19" LCD Monitor			4431HB2							
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	ThinkVision L194 Wide 19" LCD Monitor			4434HB6							
	ThinkVision L220x Wide 22" LCD Monitor			4433HB2							
	Lenovo M500 Projector			0037A05							
	Enh Perf Wireless Keyboard and Mouse			73P4067							
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>										
				<b>LIMITED WARRANTY<sup>1</sup></b>							
				⇨ <b>1-year parts and labor</b>							
				⇨ <b>International Warranty Service<sup>9</sup></b>							
				⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>							
				⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>							
				• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)							
				• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)							
				• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)							
				• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)							
				• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)							
				⇨ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b>							
				⇨ <b>Post warranty maintenance services available</b>							
				⇨ <b>24x<sup>7</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b>							

See footnotes for important warranty information

US models announced August 22, 2006

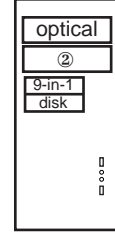
US models withdrawn effective June or August 2007, or January 2008

**ThinkCentre® A60 Tower (8700) - TopSeller (January 2007) - withdrawn**

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	L2 GHz cache	Core	Memory <sup>6</sup>	SATA disk	Media reader	EIDE optical	Integrated graphics	Mod- em	External speaker	Vista preload	Vista logo	Avail date	
A60 8700-B4U	4x4	Sempron	3400+	1.8	256KB	Single	512M	80GB <sup>2</sup>	9-in-1	Combo	NVIDIA	Yes	Spkr	Home Basic	Basic	Feb 07
A60 8700-29U	4x4	Athlon 64	3500+	2.2	512KB	Single	1GB	80GB		DVD	NVIDIA			Business	Premium	Feb 07
A60 8700-2KU	4x4	Athlon 64	3500+	2.2	512KB	Single	512M	80GB		Combo	NVIDIA	Yes		Home Basic	Basic	Feb 07
A60 8700-2AU	4x4	Athlon 64	3500+	2.2	512KB	Single	1GB	80GB		Combo	NVIDIA			Business	Premium	Feb 07
A60 8700-2BU	4x4	Athlon 64	3500+	2.2	512KB	Single	1GB	160GB		DVD±RW	NVIDIA			Business	Premium	Feb 07
A60 8700-47U	4x4	Athlon 64 X2	3800+	2.0	2x512K	Dual	1GB	80GB		DVD	NVIDIA			Business	Premium	Feb 07
A60 8700-48U	4x4	Athlon 64 X2	3800+	2.0	2x512K	Dual	1GB	80GB		Combo	NVIDIA			Business	Premium	Feb 07
A60 8700-49U	4x4	Athlon 64 X2	3800+	2.0	2x512K	Dual	512M	160GB	9-in-1	Combo	NVIDIA	Yes	Spkr	Home Basic	Basic	Feb 07
A60 8700-4KU	4x4	Athlon 64 X2	3800+	2.0	2x512K	Dual	1GB	160GB		DVD±RW	NVIDIA			Business	Premium	Feb 07
A60 8700-D8U	4x4	Athlon 64 X2	4200+	2.2	2x512K	Dual	1GB	80GB		DVD	NVIDIA			Business	Premium	Feb 07
A60 8700-D9U	4x4	Athlon 64 X2	4200+	2.2	2x512K	Dual	1GB	80GB		Combo	NVIDIA			Business	Premium	Feb 07
A60 8700-DKU	4x4	Athlon 64 X2	4200+	2.2	2x512K	Dual	1GB	160GB		DVD±RW	NVIDIA			Business	Premium	Feb 07
A60 8700-DAU	4x4	Athlon 64 X2	4200+	2.2	2x512K	Dual	1GB	250GB	9-in-1	DVD±RW	NVIDIA	Yes	Spkr	Home Basic	Basic	Feb 07

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>AMD® Sempron™ 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3500+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+ or 4200+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in 940-pin PGA package in Socket AM2	
Memory - std/max <sup>8</sup> Memory	<b>512MB or 1GB std / 4GB max</b> Two 240-pin DIMM sockets / <i>Some: (italics) two sockets used;</i> <i>Some: one socket used /</i> <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable	Bay ① 5.25", 1.6" high, access, standard optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt reader Bay ④ 3.5", 1" high, no access, standard disk Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors	<b>* modem in slot in some models</b>
SATA disk	<b>80, 160, or 250GB</b> / SATA300 7200 rpm / vibration dampening	<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> <li>• Front USB port disablement</li> </ul>
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors	
EIDE DVD	<i>Some: 16X-48X Max<sup>4</sup> DVD-ROM / single-layer / EIDE</i>	
EIDE Combo	<i>Some: 48X/32X/48X/16X Max<sup>11</sup> CD-RW/DVD-ROM Combo</i>	
EIDE DVD±RW	<i>Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)</i>	
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge	
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors	
Diskette drive	None / use optional external USB-based diskette drive	
Media Reader	<i>Some: 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0</i>	
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)	
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software	
Speaker	<i>Some: [Spkrs] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo</i>	
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®	
Modem	<i>Some: 56K<sup>10</sup> V.90 data/fax soft modem / Conexant® chipset / PCI adapter</i>	ThinkCentre desktops implement ThinkVantage® technologies and design
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo	
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs	
<b>Preloaded operating system</b>	<b>Accessories</b> <ul style="list-style-type: none"> <li>512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983</li> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>250GB Serial ATA300 Disk (7200 rpm) 41N3015</li> <li>500GB Serial ATA300 Disk (7200 rpm) 43R1990</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Super Multi-Burner Drive 41N5565</li> <li>USB 2.0 Portable 120GB Hard Disk 41N8379</li> <li>ThinkVision® L194 Wide 19" LCD Monitor 4434HB6</li> <li>ThinkVision L220x Wide 22" LCD Monitor 4433HB2</li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> </ul> </li> <li>↔ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup></b></li> </ul>
License - CD not included (all)	-	
Lotus® Notes® Stand-alone Client	-	

See footnotes for important warranty information

US models announced January 30, 2007

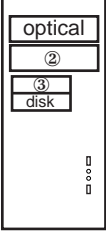
US models withdrawn effective August 2007 or January 2008

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(AC11-1) January 2008

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	EIDE optical	Integrated graphics	Preload	Workhorse Gbl, Educ	Limited warranty <sup>1</sup>	Avail date
A60	8991-24U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	80GB <sup>2</sup>	CD	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-25U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	80GB	Combo	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-2CU	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	80GB	Combo	NVIDIA	XP Pro	Educ	3-yr	Nov 06
A60	8991-DJU	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	80GB	DVD	NVIDIA	XP Pro		3-yr	May 07
A60	8991-DKU	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB	160GB	Combo	NVIDIA	XP Pro		3-yr	May 07
A60	8991-35U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB	80GB	Combo	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-38U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB	80GB	CD	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-3AU	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	1GB	160GB	DVD±RW	NVIDIA	XP Pro	Educ	3-yr	Nov 06
A60	8991-DHU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	512MB	80GB	DVD	NVIDIA	XP Pro		3-yr	May 07
A60	8991-D1U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	80GB	CD	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-D2U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	80GB	Combo	NVIDIA	XP Pro		3-yr	Aug 06
A60	8991-DEU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB	80GB	DVD	NVIDIA	XP Pro		3-yr	May 07

- *These small and medium business (SMB) models are part of the US TopSeller™ Program*
- *These models have a 3-year limited warranty*

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Athlon™ 64 3500+</b> with with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+, 4200+, or 4400+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology			<b>Tower</b> • Business black color • 6.9" W X 16.7" D X 16.14" H • 175mm W X 424mm D X 410mm H • 22.0 lb (10.0 kg) • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention					
Implementation	Processor in 940-pin PGA package in Socket AM2			Bay 1 5.25", 1.6" high, access, std optical Bay 2 5.25", 1.6" high, access, open Bay 3 3.5", 1" high, access, opt diskette Bay 4 3.5", 1" high, no access, std disk					
Memory - std/max <sup>8</sup>	<b>512MB</b> or <b>1GB</b> std / 4GB max			Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)					<b>SECURITY</b> • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) - No keylock • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Diskette write protect  ThinkCentre desktops implement ThinkVantage™ technologies and design; visit <a href="http://thinkcentre.com/thinkvantage">thinkcentre.com/thinkvantage</a>
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / dual-channel capable								
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors								
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening								
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge								
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors								
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM								
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer								
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo								
EIDE DVD±RW	Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)								
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge								
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors								
Diskette drive	None (use optional external USB-based diskette drive)								
Media reader	None								
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O								
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)								
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)								
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)								
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software								
Speaker	One internal speaker for business audio								
IEEE 1394	None								
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®								
Keyboard	2006 models: 104-key Preferred Pro Full-size keyboard (PS/2 connector) 2007 models: Preferred Pro USB Keyboard (USB connector), 104-key								
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo								
Power supply	280 watts with variable speed fan / manual switch								

<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional		<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 500GB Serial ATA300 Disk (7200 rpm) 43R1990 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L193p 19" LCD Monitor 4431HB2 ThinkVision L194 Wide 19" LCD Monitor 4434HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded</b> (only some listed) • <i>Education models:</i> VitalSource Library education software • <i>Education models:</i> Adobe® Photoshop® Elements plus Adobe Premiere® Elements • Multimedia Center for Think Offerings (combo, DVD, DVD±RW) • Sonic RecordNow and Drive Letter Access (combo, DVD±RW) • InterVideo WinDVD (combo, DVD, DVD±RW)			
<b>CD</b> • <i>Education models:</i> Adobe Photoshop Elements plus Adobe Premiere Elements			
<b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client			

See footnotes for important warranty information  
 US models announced Aug 8, Aug 22, or Nov 21, 2006 or May 1, 2007  
 US models withdrawn effective June or August 2007, or January 2008

# ThinkCentre® A60 Tower (8991) - TopSeller (Vista™) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core Memory <sup>8</sup>	SATA disk	EIDE optical	Integrated graphics	Vista preload	Vista logo	Workhorse Gbl, Educ	Limited warranty <sup>1</sup>	Avail date
A60	8991-DMU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual 1GB	80GB <sup>2</sup>	Combo	NVIDIA	Business 32	Basic	No	3-yr	May 07
A60	8991-DFU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual 1GB	160GB	Combo	NVIDIA	Business 32	Basic	No	3-yr	May 07
A60	8991-DGU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual 1GB	250GB	DVD±RW	NVIDIA	Business 32	Basic	No	3-yr	May 07

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning	<i>Mainstream enterprise stability and manageability</i>		<b>Tower</b>		
Processor	AMD® Athlon™ 64 X2 4000+ or 4400+ with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9"W X 16.7" D X 16.14"H</li> <li>• 175mm W X 424mm D X 410mm H</li> <li>• 22.0 lb (10.0 kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in 940-pin PGA package in Socket AM2		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, opt diskette Bay ④ 3.5", 1" high, no access, std disk		
Memory - std/max <sup>1</sup>	1GB std / 4GB max		Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
Memory	Two 240-pin DIMM sockets / one socket used / PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable		<b>SECURITY</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>• Diskette write protect</li> </ul>		
Graphics	NVIDIA® GF 6100 / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors		<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ 24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</li> </ul>		
SATA disk	80GB, 160GB, or 250GB / SATA300 7200 rpm / rubber vibration dampening mounts				
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge				
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors				
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo				
EIDE DVD±RW	Some: DVD and CD burner, Super Multi-Burner DL (part 41N5581)				
EIDE controller	Enhanced IDE / ATA-133, integrated in NVIDIA MCP51 south bridge				
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors				
Diskette drive	None (use optional external USB-based diskette drive)				
Media reader	None				
Chipset	NVIDIA GeForce® 6100 C51g chipset / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O				
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)				
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software				
Speaker	One internal speaker for business audio				
IEEE 1394	None				
Ethernet	Gigabit ethernet on planar / Broadcom® 5788 / PCI 2.3 / Wake on LAN®				
Modem	None				
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo				
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo				
Power supply	280 watts with variable speed fan / manual switch				
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® Vista Business Edition (32-bit)				
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Lenovo Multimedia Center</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> </ul>				
<b>License</b>	- CD not included				
	- Lotus® Notes® Stand-alone Client				
<b>Accessories</b>	512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 500GB Serial ATA300 Disk (7200 rpm) 43R1990 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 Security Memory Key 2GB 41U5119 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L190x 19" LCD Monitor 4439HB2 ThinkVision L193p 19" LCD Monitor 4431HB2 ThinkVision L194 Wide 19" LCD Monitor 4434HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Lenovo M500 Projector 0037A05 Enh Perf Wireless Keyboard and Mouse 73P4067 Other accessories at lenovo.com/accessories				

See footnotes for important warranty information  
 US models announced May 1, 2007  
 US models withdrawn effective January 2008

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 (AC11-4) January 2008

ThinkCentre® A60 Tower (9269) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz Core	Memory	Media reader	SATA disk	EIDE optical	Integrated graphics	Modem	FireWire adapter	Preload	Workhorse Global	Avail date
A60	9269-A3U	4x4	Sempron 3000+	1.6	Single	512MB	80GB <sup>2</sup>	CD	NVIDIA			XP Pro	None	Aug 06
A60	9269-B6U	4x4	Sempron 3400+	1.8	Single	512MB	9-in-1 80GB	CD	NVIDIA			XP Pro	None	Aug 06
A60	9269-B9U	4x4	Sempron 3400+	1.8	Single	512MB	9-in-1 80GB	Combo	NVIDIA			XP Home	None	Nov 06
A60	9269-B0U	4x4	Athlon 64 3500+	2.2	Single	512MB	9-in-1 160GB	DVD±RW	NVIDIA			XP Home	None	Nov 06
A60	9269-36U	4x4	Athlon 64 X2 3800+	2.0	Dual	512MB	80GB	Combo	NVIDIA			XP Pro	None	Aug 06
A60	9269-37U	4x4	Athlon 64 X2 3800+	2.0	Dual	512MB	80GB	DVD	NVIDIA			XP Pro	None	Aug 06
A60	9269-D1U	4x4	Athlon 64 X2 4200+	2.2	Dual	512MB	80GB	CD	NVIDIA			XP Pro	None	Aug 06
A60	9269-D4U	4x4	Athlon 64 X2 4200+	2.2	Dual	512MB	80GB	DVD	NVIDIA			XP Pro	None	Aug 06
A60	9269-D6U	4x4	Athlon 64 X2 4200+	2.2	Dual	1GB	9-in-1 250GB	DVD±RW	NVIDIA	Modem	1394	XP Pro	None	Nov 06

• These models have a 1-year limited warranty<sup>1</sup>

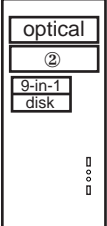
Positioning Processor	<b>Mainstream enterprise stability and manageability</b> <b>AMD Sempron™ 3000+ or 3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3500+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+ or 4200+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9"W X 16.7" D X 16.14"H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>	
Implementation Memory - std/max <sup>5</sup> Memory	Processor in 940-pin PGA package in Socket AM2 <b>512MB std / 4GB max</b> Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2 / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable</b>		
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors		
SATA disk	<b>80, 160, or 250GB</b> / SATA300 7200 rpm / vibration damping		
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge		
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors		
EIDE CD	Some: 48X-20X <sup>4</sup> CD-ROM		
EIDE Combo	Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo		
EIDE DVD	Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer / EIDE		
EIDE DVD±RW	Some: DVD and CD burner / Super Multi-Burner DL (part 41N5581)		
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge		
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors		
Diskette drive	None / use optional external USB-based diskette drive		
Media reader	None / use optional external USB-based diskette drive		
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)		
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software		
Speaker	B9U: 2-piece speakers, 6 watts (3 watts each), black, infinity logo Others: One internal speaker for business audio		
IEEE 1394	Some: FireWire PCI adapter / 1394A, 400Mbps, dual 6-pin ports on rear, one 6-pin port on front of system, no external cables included		
Ethernet	Gigabit ethernet on systemboard / Broadcom® 5788 / PCI 2.3 / Wake on LAN®		
Modem	Some: 56K <sup>10</sup> V.90 data/fax soft modem / PCI adapter		
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo		
Power supply	280 watts with variable speed fan / manual switch		
Preload with Windows XP Home <sup>5</sup> Microsoft® Windows® XP Home Edition <b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional <b>Preloaded</b> (all OSeS; only some listed) • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • Multimedia Center for Think Offerings (combo, DVD, DVD±RW) • Sonic RecordNow and Drive Letter Access (combo, DVD±RW) • InterVideo WinDVD (combo, DVD, DVD±RW) • InterVideo WinDVD Creator (DVD±RW) <b>License - CD not included</b> - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client (Notes client not supported on XP Home)	<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 500GB Serial ATA300 Disk (7200 rpm) 43R1990 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB Fingerprint Reader 41U3167 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L220x Wide 22" LCD Monitor 4433HB2 Lenovo M500 Projector 0037A05 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<p style="text-align: center;"><b>SECURITY</b></p> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                     <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>No keylock</li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>	ThinkCentre desktops implement ThinkVantage® technologies and design
<p style="text-align: center;"><b>LIMITED WARRANTY<sup>1</sup></b></p>			<ul style="list-style-type: none"> <li>1-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189)</li> <li>2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190)</li> <li>2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187)</li> <li>3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191)</li> <li>3-year LOR 24x7, Next Business Day (ThinkPlus part number 41C9188)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</li> </ul>

See footnotes for important warranty information  
 US models announced August 8, August 22, or November 21, 2006  
 US models withdrawn effective June or August 2007, or January 2008

# ThinkCentre® A60 Tower (9631) - withdrawn

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Preload	Limited warranty <sup>1</sup>	Workhorse Gbl, Educ	Avail date
A60	9631-A7U	4x4	Sempron 3000+	1.6	256KB	Single	512MB		80GB <sup>2</sup>	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-B3U	4x4	Sempron 3400+	1.8	256KB	Single	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-28U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB		160GB	Combo	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-29U	4x4	Athlon 64 3500+	2.2	512KB	Single	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-35U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr	W Gbl	Aug 06
A60	9631-36U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	Combo	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-39U	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	512MB		80GB	Combo	NVIDIA	XP Pro	3-yr	Educ	Nov 06
A60	9631-D1U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	CD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-D4U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB	9-in-1	80GB	Combo	NVIDIA	XP Pro	3-yr	Global	Aug 06
A60	9631-D7U	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr		Aug 06
A60	9631-E7U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB		80GB	DVD	NVIDIA	XP Pro	3-yr		May 07
A60	9631-EAU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB		160GB	Combo	NVIDIA	XP Pro	3-yr		May 07

• These models have a 3-year limited warranty<sup>1</sup>

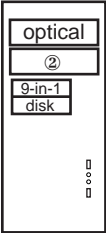
<b>Positioning</b> Processor Implementation		<b>Mainstream enterprise stability and manageability</b> <b>AMD® Sempron™ 3000+</b> or <b>3400+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3500+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+, 4200+, 4400+, or 4800+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2						<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9"W X 16.7" D X 16.14"H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul> 	
Memory - std/max <sup>8</sup> Memory		<b>512MB or 1GB</b> std / 4GB max Two 240-pin DIMM sockets / one socket used / <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable						Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt reader Bay ④ 3.5", 1" high, no access, std disk	
<b>Graphics</b>		<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors						Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
SATA disk SATA controller SATA cables EIDE CD EIDE DVD EIDE Combo EIDE controller EIDE cables Diskette drive Media reader		<b>80GB or 160GB</b> / SATA300 7200 rpm / vibration dampening Serial ATA / 300MB/sec SATA300 / integrated in south bridge One SATA cable (one 1-drop to disk) / two SATA planar connectors Some: 48X-20X <sup>4</sup> CD-ROM Some: 16X-48X Max <sup>4</sup> DVD-ROM / single-layer Some: 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge One 2-drop EIDE 80-conductor cable to optical / two planar connectors None / use optional external USB-based diskette drive Some: 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0						<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>	
<b>Chipset</b>		<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O						ThinkCentre desktops implement ThinkVantage® technologies and design	
Front ports Rear ports Rear audio ports Audio Speaker IEEE 1394 Ethernet Modem		Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm) Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15) Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm) High Definition (HD) Audio / AD1986A codec / SoundMAX® software One internal speaker for business audio None Gigabit ethernet on systemboard / Broadcom® 5788 / PCI 2.3 / Wake on LAN® None						<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ <b>3-year parts and labor</b> ⇨ <b>International Warranty Service<sup>9</sup></b> ⇨ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇨ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li><b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li><b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li><b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li><b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li><b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> ⇨ <b>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇨ <b>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</b>	
Keyboard Mouse Power supply		104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo Optical Wheel Mouse (USB only), black, Lenovo logo 280 watts with variable speed fan / manual switch							
<b>Preload with Windows XP Professional<sup>5</sup></b> Microsoft® Windows® XP Professional <b>Preloaded</b> (only some listed) • Education models: VitalSource Library education software • Education models: Adobe® Photoshop® Elements plus Adobe Premiere® Elements • Rescue and Recovery™ • Multimedia Center for Think Offerings (combo, DVD) • Sonic RecordNow and Drive Letter Access (combo) • InterVideo WinDVD (combo, DVD)		<b>Accessories</b> 512MB PC2-5300 CL5 NP DDR2 UDIMM 73P4983 1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 250GB Serial ATA300 Disk (7200 rpm) 41N3015 500GB Serial ATA300 Disk (7200 rpm) 43R1990 48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300 Super Multi-Burner DL DVD±RW EIDE Drive 41N5581 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 2GB 41U4944 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637 USB 2.0 Portable 120GB Hard Disk 41N8379 USB 2.0 Super Multi-Burner Drive 41N5565 ThinkVision® L193p 19" LCD Monitor 4431HB2 ThinkVision L194 Wide 19" LCD Monitor 4434HB6 ThinkVision L220x Wide 22" LCD Monitor 4433HB2 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		<b>CD</b> • Education models: Adobe Photoshop Elements plus Adobe Premiere Elements <b>License</b> - CD not included - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client					

See footnotes for important warranty information  
 US models announced Aug 8, Aug 22, or Nov 21, 2006, or May 1, 2007  
 US models withdrawn effective June or August 2007, or January 2008



Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Preload	Educ load	Limited warranty <sup>1</sup>	Workhorse Global	Avail date
A60	9631-EEU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	None	80GB <sup>2</sup>	Combo	NVIDIA XP Pro	HE	3-yr	No	Jun 07	
A60	9631-EFU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	None	80GB	Combo	NVIDIA XP Pro	K12	3-yr	No	Jun 07	

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology										<b>Tower</b>		
Implementation	Processor in 940-pin PGA package in Socket AM2										<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9"W X 16.7" D X 16.14"H</li> <li>175mm W X 424mm D X 410mm H</li> <li>22.0 lb (10.0 kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>		
Memory - std/max <sup>8</sup>	1GB std / 4GB max										Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt reader Bay ④ 3.5", 1" high, no access, std disk		
Memory	Two 240-pin DIMM sockets / one socket used / <b>PC2-5300 667MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable										Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors												
SATA disk	<b>80GB</b> / SATA300 7200 rpm / vibration dampening												
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge												
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors												
EIDE Combo	48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo												
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge												
EIDE cables	One 2-drop EIDE 80-conductor cable to optical, 2 planar connectors												
Diskette drive	None / use optional external USB-based diskette drive												
Media reader	None												
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O										<b>SECURITY</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> <li>- No keylock</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable</li> <li>Diskette write protect</li> </ul>		
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)												
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software												
Speaker	External 2-piece speakers, 6 watts (3 watts each), black, Infinity logo												
IEEE 1394	None												
Ethernet	Gigabit ethernet on systemboard / Broadcom® 5788 / PCI 2.3 / Wake on LAN®												
Modem	None												
Keyboard	104-key Preferred Pro Full-size keyboard (PS/2 connector), black, Lenovo logo												
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo												
Power supply	280 watts with variable speed fan / manual switch												

Preload with Windows XP Professional <sup>5</sup>	Accessories
Microsoft® Windows® XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984
<b>Preloaded</b> (only some listed)	2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985
• <i>Some (K12):</i> K-12 education software	250GB Serial ATA300 Disk (7200 rpm) 41N3015
- VitalSource Library School Edition	500GB Serial ATA300 Disk (7200 rpm) 43R1990
- Adobe® Instructor Resource Center	48X/32X/48X/16X Max <sup>11</sup> Combo drive (blk) 73P3300
- Adobe Digital School Collection	Super Multi-Burner DL DVD±RW EIDE Drive 41N5581
- Photoshop Elements 5 (and CD)	USB 2.0 Lenovo Multimedia Headset 40Y8518
- Premier Elements 3 (and DVD)	USB 2.0 Lenovo Webcam 40Y8519
- Acrobat 8 Professional (and CD)	USB 2.0 Essential Memory Key 2GB 41U4944
- Contribute 4 (and CD)	USB 2.0 Security Memory Key 1GB 41U5118
• <i>Some (HE):</i> Higher education software	USB 2.0 Security Memory Key 2GB 41U5119
- VitalSource Library College Edition	USB 2.0 Security Memory Key 4GB 41U5120
- Adobe® Instructor Resource Center	USB 2.0 CD-RW/DVD-ROM Combo II Drive 40Y8637
- Adobe Photoshop Elements 5 (and CD)	USB 2.0 Portable 120GB Hard Disk 41N8379
- Adobe Premier Elements 3 (and DVD)	USB 2.0 Super Multi-Burner Drive 41N5565
• Rescue and Recovery™	ThinkVision® L151 15" LCD Monitor 9165AC6
• Client Security Solution™	ThinkVision L171p 17" LCD Monitor 9417HC2
• ThinkVantage Productivity Center	ThinkVision L190x 19" LCD Monitor 4439HB2
• ThinkVantage System Update	ThinkVision L193p 19" LCD Monitor 4431HB2
• System Migration Assistant	ThinkVision L194 Wide 19" LCD Monitor 4434HB6
• Symantec® Client Security™	ThinkVision L220x Wide 22" LCD Monitor 4433HB2
• Diskeeper® Lite	Lenovo M500 Projector 0037A05
• PC-Doctor™ (diagnostics)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>
• Windows Live™ Toolbar	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>
• Windows Live Search	
• Picasa from Google	
• Multimedia Center for Think Offerings (combo)	
<b>License</b> - CD not included	
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client	

ThinkCentre desktops implement ThinkVantage® technologies and design
<b>LIMITED WARRANTY<sup>1</sup></b> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24x7<sup>14</sup> toll-free support for warranty issues during the warranty period<sup>1</sup> 800-IBM-SERV (426-7378)</li> </ul>

See footnotes for important warranty information  
 US models announced June 5, 2007  
 US models withdrawn effective January 2008

# ThinkCentre® A60 Tower (9631) - Vista™ - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>5</sup>	Media reader	SATA disk	EIDE optical	Integrated graphics	Int or ext speaker	Vista preload	Workhorse Gbl, Educ	Avail date
A60	9631-2BU	4x4	Athlon 64 3500+	2.2	512KB	Single	1GB		160GB <sup>2</sup>	Combo	NVIDIA	Internal	Business		Feb 07
A60	9631-EGU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB		80GB	Combo	NVIDIA	Ext Spks	Business	K12	Jun 07
A60	9631-EHU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB		80GB	Combo	NVIDIA	Ext Spks	Business	HE	Jun 07
A60	9631-3AU	4x4	Athlon 64 X2 3800+	2.0	2x512KB	Dual	1GB		80GB	DVD	NVIDIA	Internal	Business	W Gbl	Feb 07
A60	9631-DKU	4x4	Athlon 64 X2 4200+	2.2	2x512KB	Dual	1GB	9-in-1	80GB	Combo	NVIDIA	Internal	Business	Gbl	Feb 07
A60	9631-E8U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB		80GB	DVD	NVIDIA	Internal	Business		May 07
A60	9631-E9U	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB		160GB	Combo	NVIDIA	Internal	Business		May 07

• These models have a 3-year limited warranty<sup>1</sup>

Positioning	<i>Mainstream enterprise stability and manageability</i>	
Processor	<b>AMD® Athlon™ 64 3500+ or 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 3800+, 4200+, 4400+, or 4800+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 controller, and virtualization technology	
Implementation	Processor in 940-pin PGA package in Socket AM2	
Memory	<b>1GB std / 4GB max</b> / two 240-pin DIMM sockets; <i>Italics:</i> std memory in both sockets; no sockets available; <i>Non-italics:</i> std memory in one socket; one socket available; <b>3AU/DAU:</b> <b>PC2-4200 533MHz DDR2</b> / non-parity / CAS latency 4 (CL4) / unbuffered / dual-channel capable <b>2BU/Exx:</b> <b>PC2-5300 667MHz DDR2</b> / non-parity / CAS latency 5 (CL5) / unbuffered / dual-channel capable	
Graphics	<b>NVIDIA® GF 6100</b> / integrated graphics controller in C51g chipset / uses main memory / 425MHz / one 15-pin analog D-sub connector / optional PCI Express x16 adapter can support two monitors	
SATA disk	<b>80GB</b> or <b>160GB</b> / SATA300 7200 rpm / vibration dampening	
SATA controller	Serial ATA / 300MB/sec SATA300 / integrated in south bridge	
SATA cables	One SATA cable (one 1-drop to disk) / two SATA planar connectors	
EIDE DVD	<i>Some:</i> 16X-48X Max <sup>4</sup> DVD-ROM / single-layer	
EIDE Combo	<i>Some:</i> 48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo	
EIDE controller	Enhanced IDE / ATA-133 / integrated in NVIDIA MCP51 south bridge	
EIDE cables	One 2-drop EIDE 80-conductor cable to optical / two planar connectors	
Diskette drive	None / use optional external USB-based diskette drive	
Media reader	<i>Some:</i> 9-in-1 media reader / occupies diskette drive bay / internal USB 2.0	
Chipset	<b>NVIDIA GeForce® 6100 C51g chipset</b> / C51g includes graphics controller, support for PCI Express x1 slot, PCI Express x16 slot, PCI 2.3 slots / NVIDIA MCP51 south bridge for SATA300, ATA-133 EIDE, USB, Low Pin Count interface / Winbond® W83627EHG Super I/O	
Front ports	Two USB 2.0, microphone (mono, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, one 9-pin serial, parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (mono, 3.5mm)	
Audio	High Definition (HD) Audio / AD1986A codec / SoundMAX® software	
Speaker	<i>Some:</i> [Ext spks] 2-piece speakers, 6 watts (3 watts each), black, Infinity logo <i>Some:</i> [Internal] one internal speaker for business audio	
IEEE 1394	None	
Ethernet	Gigabit ethernet on systemboard / Broadcom® 5788 / PCI 2.3 / Wake on LAN®	
Modem	None	
Keyboard	<i>Feb models:</i> 104-key Preferred Pro Full-size keyboard (PS/2 connector) <i>May/Jun models:</i> Preferred Pro USB Keyboard (USB connector), 104-key	
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo	
Power supply	280 watts with variable speed fan / manual switch / 2 diagnostic LEDs	
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® Vista Business Edition (32-bit) ♦ <i>EGU/EHU:</i> Vista Basic logo ♦ <i>Others:</i> Vista Premium logo  <b>Preloaded applications<sup>5</sup></b> • <i>Some (K12):</i> K-12 education software - VitalSource Library School Edition - Adobe® Instructor Resource Center - Adobe Digital School Collection - Photoshop Elements 5 (and CD) - Premier Elements 3 (and DVD) - Acrobat 8 Professional (and CD) - Contribute 4 (and CD) • <i>Some (HE):</i> Higher education software - VitalSource Library College Edition - Adobe® Instructor Resource Center - Adobe Photoshop Elements 5 (and CD) - Adobe Premier Elements 3 (and DVD)  • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Lenovo Multimedia Center • Norton Internet Security™ (90 days of virus definitions) • Diskeeper® Home • PC-Doctor™ (diagnostics) • Adobe® Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google  <b>License</b> - CD not included - Lotus® Notes® Stand-alone Client		
<b>Tower</b> • Business black color • 6.9"W X 16.7" D X 16.14"H • 175mm W X 424mm D X 410mm H • 22.0 lb (10.0 kg) • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention  Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, std or opt reader Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCI Express x16 (75w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)		
<b>SECURITY</b> • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) - No keylock • Power-on password • Administrator password • Boot sequence control • Boot without keyboard, mouse, diskette • USB, ethernet, SATA, EIDE, serial, parallel, diskette enable or disable • Diskette write protect • Front USB port disablement		
ThinkCentre desktops implement ThinkVantage® technologies and design		
<b>LIMITED WARRANTY<sup>1</sup></b> ⇨ 3-year parts and labor ⇨ International Warranty Service® ⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇨ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192) • 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193) • 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194) • 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195) • 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196) ⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ Post-warranty maintenance services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇨ 24x7 <sup>14</sup> toll-free support for warranty issues during the warranty period <sup>1</sup> 800-IBM-SERV (426-7378)		

See footnotes for important warranty information  
 US models announced January 30, May 1, or June 5, 2007  
 US models withdrawn effective August 2007 or January 2008

**Partial list of accessories supported on ThinkCentre A60 originally announced on August 8, 2006**

**Memory**

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	ann 06/28/05
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	ann 06/28/05
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	ann 09/26/06

**Optical**

16X Max <sup>4</sup> DVD-ROM (black)	22P6950	
48X/32X/48X/16X Max <sup>11</sup> CD-RW/DVD-ROM Combo drive (black)	73P3300	ann 04/06/04
Super Multi-Burner DL DVD±RW EIDE Drive	41N5581	ann 05/30/06

**Storage and removable storage**

40GB Serial ATA150 Disk (7200 rpm)	22P7185	
80GB Serial ATA300 Disk (7200 rpm)	09N4253	ann 05/19/03
160GB Serial ATA300 Disk (7200 rpm)	09N4254	ann 05/19/03
250GB Serial ATA300 Disk (7200 rpm)	41N3015	ann 01/24/06
500GB Serial ATA300 Disk (7200 rpm)	43R1990	ann 11/06/07

USB Portable Diskette Drive	05K9276	ann 06/05/00
USB 2.0 Essential Memory Key 1GB	41U4940	ann 01/23/07
USB 2.0 Essential Memory Key 2GB	41U4944	ann 01/23/07
USB 2.0 Security Memory Key 1GB	41U5118	ann 07/17/07
USB 2.0 Security Memory Key 2GB	41U5119	ann 07/17/07
USB 2.0 Security Memory Key 4GB	41U5120	ann 07/17/07
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	ann 01/05/06
USB 2.0 Portable 80GB Hard Disk	41N8378	ann 04/17/07
USB 2.0 Portable 120GB Hard Disk	41N8379	ann 04/17/07
USB 2.0 Super Multi-Burner Drive	41N5565	ann 01/23/07

**Graphics**

Tower 8700/8991/9269/9631 supports 75 watts max:  
None

Desktop 9266/9384 supports Low Profile 25 watts max:  
None

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Enh Perf Wireless Keyboard and Mouse	73P4067	ann 12/07/04

**Mouse**

USB Optical Wheel Mouse	06P4069	ann 05/21/03
Optical 3-Button ScrollPoint® Mouse	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB, PS/2)	41U3074	ann 01/23/07

**Multimedia**

USB 2.0 Lenovo Multimedia Headset	40Y8518	ann 06/27/06
USB 2.0 Lenovo Webcam	40Y8519	ann 08/29/06

**Data/Video Projectors**

Lenovo M500 Projector	0037A05	ann 02/28/06
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**Security**

Kensington® Cable Lock from Lenovo	73P2582	ann 12/29/03
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06
USB Fingerprint Reader	41U3167	ann 10/24/06

**Monitors**

Lenovo E75 17" CRT Monitor (16.0" vis)	6307BTN	ann 01/16/07
ThinkVision® L151 15" LCD Monitor	9165AC6	ann 10/23/07
ThinkVision L171 17" LCD Monitor	9227AD1	ann 10/23/07
ThinkVision L171p 17" LCD Monitor	9417HC2	ann 10/31/06
ThinkVision L190x 19" LCD Monitor	4439HB2	ann 10/23/07
ThinkVision L193p 19" LCD Monitor	4431HB2	ann 10/23/07
ThinkVision L194 Wide 19" LCD Monitor	4434HB6	ann 10/23/07
ThinkVision L220x Wide 22" LCD Monitor	4433HB2	ann 10/23/07

**Monitor Accessories<sup>46</sup>**

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
Kensington Cable Lock from Lenovo	73P2582	ann 12/29/03
Radial Arm	19K4464	ann 05/05/00

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

Other accessories at [lenovo.com/accessories](http://lenovo.com/accessories)

Accessories Guide pdf at [lenovo.com/accessoriesguide](http://lenovo.com/accessoriesguide)

Need to buy accessories no longer marketed by Lenovo? See [www.itxchange.com/lenovo](http://www.itxchange.com/lenovo) for the Options Continuation Program.

**ThinkPlus™.7 service upgrade options<sup>7</sup> for 1-year warranty models:**

1-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9189
2-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9190
2-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9187
3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9191
3-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9188

**ThinkPlus™.7 service upgrade options<sup>7</sup> for 3-year warranty models:**

3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9192
3-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9193
4-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9194
4-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9195
4-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9196

Post-warranty annual maintenance agreements at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)

# ThinkCentre® A61e Eco Ultra Small (6417) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	ENERGY STAR 4.0	EPEAT	Preload	Vista logo	Global Educ	Avail date
A61e	6417-12U	0x2	Sempron LE-1150	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1200	ES40	Gold	XP Pro	None		Sep 07
A61e	6417-01U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	512MB	80GB	DVD	X1200	ES40	Gold	XP Pro	None		Feb 08
A61e	6417-15U	0x2	Sempron LE-1150	2.0	256KB	Single	512MB	80GB	DVD	X1200	ES40	Gold	Bus32	Basic		May 08
A61e	6417-16U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	1GB	80GB	DVD	X1200	ES40	Gold	Bus32	Prem		May 08


- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Only 4.5 liter volume (25% less than 6.3 liter Ultra Small version of ThinkCentre M55)**
- **Standby power draw of 4.1 watts with normal idle of 47 watts**

Positioning Processor	Energy efficiency and tiny footprint for mainstream computing <b>AMD Sempron™ LE-1150</b> with single-core, AMD64, 128KB L1 cache and 256KB L2 cache, 1600MHz system bus, and integrated DDR2 memory controller or <b>AMD Athlon™ X2 BE-2350</b> with dual-core, AMD64, 2x128KB L1 cache and 2x512KB L2 cache, 2000MHz system bus, integrated DDR2 memory controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2	<b>Eco Ultra Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None	
Memory	<b>512MB or 1GB std</b> , 4GB max <sup>3</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Up to 25% less space than M55 Ultra Small</li> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3 to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>	
Graphics	<b>ATI™ Radeon™ X1200</b> , integrated graphics in 690V, uses main memory (up to 256MB), one analog VGA DB-15 connector		
SATA disk	<b>80GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600		
SATA DVD	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors		
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600 south bridge, no EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 690V Chipset</b> : SB600 I/O Controller Hub for SATA 3.0Gb/s, ATA-133 EIDE, USB, LPC bus / ITE Tech® IT8726F Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, AD1982 HD codec, SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5786, PCIe x1, Wake on LAN®		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 85% PSU		
		<b>Security</b>	<ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
		Supports ThinkVantage® technologies	
<b>Preloaded operating system<sup>20</sup></b>			<b>Security</b>
- <i>Some</i> : Microsoft® Windows® XP Professional with Vista® COA			<ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
- <i>Some</i> : Microsoft Windows Vista Business Edition (32-bit)			
<b>Preloaded applications<sup>5</sup> (all OSes)</b>			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• System Migration Assistant			
• Norton Internet Security™ (90 days of virus definitions)			
• Diskkeeper® Home			
• PC-Doctor™ (diagnostics)			
• Adobe® Reader			
• Windows Live™ Toolbar			
• Windows Live Search			
• Picasa from Google			
• Microsoft Office 2007 Trial (60-day)			
• Multimedia Center for Think Offerings (DVD) (XP)			
• Corel® WinDVD® (DVD)			
<b>Accessories</b>			
1GB PC2-5300 DDR2 SODIMM (notebook)	43R1763		
2GB PC2-5300 DDR2 SODIMM (notebook)	43R1756		
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254		
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015		
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
USB Portable Diskette Drive	05K9276		
USB 2.0 Lenovo Multimedia Headset	40Y8518		
USB 2.0 Lenovo Webcam	40Y8519		
USB 2.0 Essential Memory Key 32GB	45K1258		
USB 2.0 Security Memory Key 4GB	41U5120		
USB 2.0 Ultra Secure Memory Key 2GB	45J5916		
USB 2.0 Ultra Secure Memory Key 4GB	45J5917		
USB 2.0 Ultra Secure Memory Key 8GB	45J5918		
USB 2.0 Portable 160GB Hard Disk	43R1784		
USB 2.0 Portable Secure 320GB Hard Disk	43R2019		
USB 2.0 Super Multi-Burner Drive	41N5565		
Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
ThinkVision® L1700p 17" Monitor	9417HE2		
ThinkVision L1940p Wide 19" Monitor	4424HB6		
ThinkVision L2240p Wide 22" Monitor	4422HB6		
ThinkVision L2440p Wide 24" Monitor	4420HB2		
ThinkVision USB Soundbar	40Y7616		
ThinkCentre Ultra Small Under Desk Mount	40Y8625		
Lenovo Vertical PC and Monitor Stand	41R4359		
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067		
USB Travel Keyboard with UltraNav™	31P9490		
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074		
Kensington Cable Lock from Lenovo	73P2582		
Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
			EPEAT™ Gold rating ENERGY STAR® 4.0-compliant RoHS-compliant
			<b>Limited Warranty<sup>1</sup></b> ↪ <b>1-year parts and labor</b> ↪ <b>International Warranty Service<sup>9</sup></b> ↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)</li> </ul> ↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ↪ <b>Post warranty maintenance services available</b> ↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

See footnotes for important warranty information  
 US models announced September 12, 2007, February 18, 2008, or April 15, 2008  
 US models withdrawn effective October or December 2008

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	ENERGY STAR 4.0	EPEAT	Preload	Vista logo	Global Educ	Availability
A61e	6418-13U	0x2	Sempron LE-1150	2.0	256KB	Single	1GB	80GB <sup>2</sup>	Combo	X1200	ES40	Gold	XP Pro	No	Sep 07	
A61e	6418-01U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	1GB	160GB	DVD±RW	X1200	ES40	Gold	XP Pro	No	Feb 08	
A61e	6418-02U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	2GB	160GB	DVD±RW	X1200	ES40	Gold	XP Pro	No	Feb 08	
A61e	6418-11U	0x2	Sempron LE-1150	2.0	256KB	Single	1GB	80GB	Combo	X1200	ES40	Gold	Bus32	Basic	No	Sep 07
A61e	6418-12U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	1GB	160GB	DVD±RW	X1200	ES40	Gold	Bus32	Basic	No	Sep 07
A61e	6418-16U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual	2GB	160GB	DVD±RW	X1200	ES40	Gold	Bus32	Prem	No	May 08

**• These small and medium business (SMB) models are part of the US TopSeller™ Program**  
**• Only 4.5 liter volume (25% less than 6.3 liter Ultra Small version of ThinkCentre M55)**  
**• Standby power draw of 4.1 watts with normal idle of 47 watts**

Positioning Processor	Energy efficiency and tiny footprint for mainstream computing <b>AMD® Sempron™ LE-1150</b> with single-core, AMD64, 128KB L1 cache and 256KB L2 cache, 1600MHz system bus, and integrated DDR2 memory controller or <b>AMD Athlon™ X2 BE-2350</b> with dual-core, AMD64, 2x128KB L1 cache and 2x512KB L2 cache, 2000MHz system bus, integrated DDR2 memory controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2	<b>Eco Ultra Small</b>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None	
Memory	<b>1GB or 2GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Italics:</i> standard memory in both sockets; no sockets available; <i>Non-italics:</i> standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Up to 25% less space than M55 Ultra Small</li> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3 to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>	
Graphics	<b>ATI™ Radeon™ X1200</b> , integrated graphics in 690V, uses main memory (up to 256MB), one analog VGA DB-15 connector		
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar		
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600 south bridge, no EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 690V Chipset</b> ; SB600 I/O Controller Hub for SATA 3.0Gb/s, ATA-133 EIDE, USB, LPC bus / ITE Tech® IT8726F Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, AD1982 HD codec, SoundMAX® software		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5786, PCIe x1, Wake on LAN®		
Modem	None		
Security chip	None		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo		
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo		
Power supply	External AC/DC adapter, 130 watts, autosensing, 85% PSU		
			<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
			Supports ThinkVantage® technologies
			EPEAT™ Gold rating ENERGY STAR® 4.0-compliant RoHS-compliant
			<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ ThinkPlus services at lenovo.com/thinkplus/warranty</li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
<b>Preloaded operating system<sup>20</sup></b>		<b>Accessories</b>	
- <i>Some:</i> Microsoft® Windows® XP Professional with Vista® COA		1GB PC2-5300 DDR2 SODIMM (notebook)	43R1763
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)		2GB PC2-5300 DDR2 SODIMM (notebook)	43R1756
		250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015
		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
		USB Portable Diskette Drive	05K9276
		USB 2.0 Lenovo Multimedia Headset	40Y8518
		USB 2.0 Lenovo Webcam	40Y8519
		USB 2.0 Essential Memory Key 32GB	45K1258
		USB 2.0 Security Memory Key 2GB	41U5119
		USB 2.0 Security Memory Key 4GB	41U5120
		USB 2.0 Ultra Secure Memory Key 2GB	45J5916
		USB 2.0 Ultra Secure Memory Key 4GB	45J5917
		USB 2.0 Ultra Secure Memory Key 8GB	45J5918
		USB 2.0 Portable 160GB Hard Disk	43R1784
		USB 2.0 Portable Secure 320GB Hard Disk	43R2019
		ThinkVision® L1700p 17" Monitor	9417HE2
		ThinkVision L1940p Wide 19" Monitor	4424HB6
		ThinkVision L2240p Wide 22" Monitor	4422HB6
		ThinkVision L2440p Wide 24" Monitor	4420HB2
		ThinkVision USB Soundbar	40Y7616
		ThinkCentre Ultra Small Under Desk Mount	40Y8625
		Lenovo Vertical PC and Monitor Stand	41R4359
		Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067
		USB Travel Keyboard with UltraNav™	31P9490
		Laser Tilt Wheel Mouse (USB, PS/2)	41U3074
		Kensington Cable Lock from Lenovo	73P2582
		Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
		Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	


See footnotes for important warranty information  
 US models announced September 12, 2007, February 18, 2008, or April 15, 2008  
 US models withdrawn effective October or December 2008

# ThinkCentre® A61e Eco Ultra Small (6449) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	L2 cache GHz	Core Memory	SATA disk	SATA optical	Integrated graphics	ENERGY STAR 4.0	EPEAT	Vista preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A61e	6449-11U	0x2	Sempron LE-1150	2.0	256KB	Single 1GB	80GB <sup>2</sup> Combo	X1200	ES40	Gold	Bus32	3-yr	Gbl	Sep 07
A61e	6449-12U	0x2	Athlon X2 BE-2350	2.1	2x512KB	Dual 1GB	160GB DVD±RW	X1200	ES40	Gold	Bus32	3-yr	Gbl	Sep 07

- Only 4.5 liter volume (25% less than 6.3 liter Ultra Small version of ThinkCentre M55)
- Standby power draw of 4.1 watts with normal idle of 47 watts

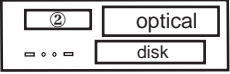
Positioning Processor	Energy efficiency and tiny footprint for mainstream computing <b>AMD® Sempron™ LE-1150</b> with single-core, AMD64, 128KB L1 cache and 256KB L2 cache, 1600MHz system bus, and integrated DDR2 memory controller or <b>AMD Athlon™ X2 BE-2350</b> with dual-core, AMD64, 2x128KB L1 cache and 2x512KB L2 cache, 2000MHz system bus, integrated DDR2 memory controller, and virtualization technology	<b>Eco Ultra Small</b>  Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk Slots: None
Implementation	Processor in 940-pin PGA package in Socket AM2	
Memory	<b>1GB std</b> , 4GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, two 200-pin SODIMM sockets (notebook); <i>Non-italics</i> : standard memory in one socket; one socket available	<ul style="list-style-type: none"> <li>• Up to 25% less space than M55 Ultra Small</li> <li>• Business black color; metal case</li> <li>• 10.8" W X 9.5" D X 3.2" H</li> <li>• 275mm W X 242mm D X 81mm H</li> <li>• 7.2 to 8.2lb (3.3 to 3.7kg)</li> <li>• Toolless disk and optical drive removal</li> <li>• Hinged toolless cover for easy serviceability</li> <li>• Supports Vertical PC and Monitor Stand (41R4359)</li> </ul>
Graphics	<b>ATI™ Radeon™ X1200</b> , integrated graphics in 690V, uses main memory (up to 256MB), one 15-pin analog D-sub connector	
SATA disk	<b>80GB</b> or <b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<p style="text-align: center;"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® Microsaver® cable) - optional cable also locks the cover by deactivating the cover release buttons</li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600	
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive	
SATA DVD±RW	<i>Some</i> : Super Multi-Burner DL DVD±RW SATA Drive (41N5620)	
SATA cables	Two SATA cables (each 1-drop to device), two SATA connectors on planar	
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600 south bridge, no EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 690V Chipset</b> ; SB600 I/O Controller Hub for SATA 3.0Gb/s, ATA-133 EIDE, USB, LPC bus / ITE Tech® IT8726F Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, ethernet (RJ-45), monitor (DB-15)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, AD1982 HD codec, SoundMAX® software	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Broadcom® BCM5786, PCIe x1, Wake on LAN®	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo logo	
Mouse	Optical Wheel Mouse (USB connector), black, Lenovo logo	
Power supply	External AC/DC adapter, 130 watts, autosensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	Supports ThinkVantage® technologies
- Microsoft® Windows® Vista® Business Edition (32-bit)	1GB PC2-5300 DDR2 SODIMM (notebook) 43R1763	EPEAT™ Gold rating
↕ Vista Basic logo	2GB PC2-5300 DDR2 SODIMM (notebook) 43R1756	ENERGY STAR® 4.0-compliant
<b>Preloaded applications<sup>5</sup></b>	160GB SATA 3.0Gb/s Disk (7200 rpm) 09N4254	RoHS-compliant
• Rescue and Recovery™	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	<p style="text-align: center;"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
• Client Security Solution™	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
• ThinkVantage Productivity Center	USB Portable Diskette Drive 05K9276	
• ThinkVantage System Update	USB 2.0 Lenovo Multimedia Headset 40Y8518	
• System Migration Assistant	USB 2.0 Lenovo Webcam 40Y8519	
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Essential Memory Key 32GB 45K1258	
• Diskeeper® Home	USB 2.0 Security Memory Key 2GB 41U5119	
• PC-Doctor™ (diagnostics)	USB 2.0 Security Memory Key 4GB 41U5120	
• Adobe® Reader	USB 2.0 Ultra Secure Memory Key 2GB 45J5916	
• Windows Live™ Toolbar	USB 2.0 Ultra Secure Memory Key 4GB 45J5917	
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 8GB 45J5918	
• Picasa from Google	USB 2.0 Portable 160GB Hard Disk 43R1784	
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Super Multi-Burner Drive 41N5565	
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	ThinkVision® L1700p 17" Monitor 9417HE2	
• Corel® WinDVD® (combo, DVD±RW)	ThinkVision L1940p Wide 19" Monitor 4424HB6	
	ThinkVision L2240p Wide 22" Monitor 4422HB6	
	ThinkVision L2440p Wide 24" Monitor 4420HB2	
	ThinkVision USB Soundbar 40Y7616	
	ThinkCentre Ultra Small Under Desk Mount 40Y8625	
	Lenovo Vertical PC and Monitor Stand 41R4359	
	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067	
	USB Travel Keyboard with UltraNav™ 31P9490	
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074	
	Kensington Cable Lock from Lenovo 73P2582	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
US models announced September 12, 2007  
US models withdrawn effective October 2008

# ThinkCentre® A61 Desktop (9144) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A61	9144-ADU	4x3	Sempron 3600+	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9144-B4U	4x3	Athlon 64 3800+	2.4	512KB	Single	1GB	160GB	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9144-AKU	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9144-AJU	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>AMD® Sempron™ 3600+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4400+ or 4800+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology</p> <p>Processor in 940-pin PGA package in Socket AM2</p>		<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.3" H</li> <li>• 331mm W X 412mm D X 108mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																																								
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ③ 3.5", 1" high, no access, std disk</p>																																																								
Memory	<p><b>512MB or 1GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>																																																										
Graphics	<p><b>ATI™ Radeon™ X1250</b>, integrated graphics in 690G, uses main memory (up to 256MB), one analog VGA DB-15 connector</p>		<p>Slot 1: Low Profile, PCI Express x1</p> <p>Slot 2: Low Profile, PCI Express x16 (25w max)</p> <p>Slot 3: Low Profile, 32-bit PCI 2.3 (5v)</p> <p>Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p>																																																								
DVI-D connector	None																																																										
SATA disk	<p><b>80GB or 160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																																																								
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support</p>																																																										
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive (41N5618)</p>																																																										
SATA Combo	<p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p>																																																										
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>																																																										
EIDE controller	<p>Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar</p>																																																										
Diskette drive	None																																																										
Media reader	None																																																										
Chipset	<p><b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>																																																										
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																																										
Rear ports	<p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15)</p>																																																										
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>																																																										
Audio	<p>High Definition (HD) Audio, ALC888 codec</p>																																																										
Speaker	<p>One internal speaker for business audio</p>																																																										
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0</p>																																																										
Modem	None																																																										
Security chip	<p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>																																																										
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key</p>																																																										
Mouse	<p>Optical Wheel Mouse (USB only), black, Lenovo logo</p>																																																										
Power supply	<p>220 watts with variable speed fan, manual switch</p>																																																										
<b>Preloaded operating system<sup>20</sup></b>	<p>- Microsoft® Windows® XP Professional with Vista® COA</p> <p>◆ Disk-to-Disk Recovery (in hidden protected area)</p>		<p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Security Memory Key 2GB</td><td>41U5119</td></tr> <tr><td>USB 2.0 Security Memory Key 4GB</td><td>41U5120</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 2GB</td><td>45J5916</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 4GB</td><td>45J5917</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>USB 2.0 Super Multi-Burner</td><td>41N5565</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L1700p 17" Monitor</td><td>9417HE2</td></tr> <tr><td>ThinkVision L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ATI Radeon HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Security Memory Key 2GB	41U5119	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 Ultra Secure Memory Key 2GB	45J5916	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	USB 2.0 Super Multi-Burner	41N5565	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1700p 17" Monitor	9417HE2	ThinkVision L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ATI Radeon HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962
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ATI Radeon HD 2400 XT 256MB	43R1962																																																										
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (combo, DVD)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo, DVD)</li> </ul>																																																										
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<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																											

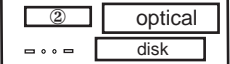
See footnotes for important warranty information  
 US models announced August 14, 2007  
 US models withdrawn effective June, September, or December 2008

# ThinkCentre<sup>®</sup> A61 Desktop (9144) - Vista<sup>®</sup> - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Vista preload	Vista logo	Global Educ	Avail date
A61	9144-ACU	4x3	Sempron 3600+	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	Yes		Business32	Basic		Aug 07
A61	9144-AGU	4x3	Athlon 64 3800+	2.4	512KB	Single	1GB	160GB	Combo	X1250	Yes		Business32	Premium		Aug 07
A61	9144-B5U	4x3	Athlon 64 X2 4000+	2.1	2x512KB	Dual	1GB	80GB	DVD	X1250	Yes	DVI-D	Business32	Basic	Gbl	Aug 07
A61	9144-B6U	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	DVD	X1250	Yes	DVI-D	Business32	Basic	Gbl	Aug 07
A61	9144-ALU	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250	Yes		Business32	Premium		Aug 07
A61	9144-B7U	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	Business32	Basic		Aug 07
A61	9144-AMU	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD±RW	X1250	Yes		Business32	Premium		Aug 07
A61	9144-ANU	4x3	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD±RW	X1250	Yes		Business64	Premium		Nov 07
A61	9144-BAU	4x3	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	80GB	DVD	X1250	Yes		Business32	Basic		Oct 07
A61	9144-BBU	4x3	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	Business32	Basic		Oct 07
A61	9144-BCU	4x3	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	160GB	DVD±RW	X1250	Yes		Business32	Basic		Oct 07

Positioning Processor	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>AMD<sup>®</sup> Sempron<sup>™</sup> 3600+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or  <b>AMD Athlon<sup>™</sup> 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or  <b>AMD Athlon 64 X2 4000+, 4400+, 4800+, or 5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology</p>	<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>Business black color</li> <li>13.0" W X 16.2" D X 4.3" H</li> <li>331mm W X 412mm D X 108mm H</li> <li>18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>
Implementation	Processor in 940-pin PGA package in Socket AM2	
Memory	<p><b>512MB or 1GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p>	<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x1*                      Slot 2: Low Profile, PCI Express x16 (25w max)                      Slot 3: Low Profile, 32-bit PCI 2.3 (5v)                      Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p> <p>* <i>Some:</i> DVI-D connector on bracket for DVI-D Cable blocks slot</p>
Graphics	<p><b>ATI<sup>™</sup> Radeon<sup>™</sup> X1250</b>, integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector  <i>Some:</i> DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView<sup>™</sup>]); supports up to 4 monitors with opt dual head ATI graphics adapter</p>	
DVI-D connector		
SATA disk	<b>80GB</b> or <b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington<sup>®</sup> Microsaver<sup>®</sup> cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>Individual USB port disablement</li> </ul> <p>Supports ThinkVantage<sup>®</sup> technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus<sup>™</sup> part number 41C9192)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ Post warranty maintenance services available</li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618)	
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<p><b>AMD 690G Chipset</b> with HyperTransport<sup>™</sup> 1.0 and PCI Express<sup>®</sup> 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond<sup>®</sup> W83627DHG Super I/O</p>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, ALC888 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell <sup>®</sup> 88E8071, PCIe x1, Wake on LAN <sup>®</sup> , ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper <sup>™</sup> Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key	
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo	
Power supply	220 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<p><i>Some:</i> Microsoft<sup>®</sup> Windows<sup>®</sup> Vista Business Edition (32-bit)</p> <p><i>Some:</i> Microsoft Windows Vista Business Edition (64-bit)</p>	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<ul style="list-style-type: none"> <li>• Rescue and Recovery<sup>™</sup></li> <li>• Client Security Solution<sup>™</sup></li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security<sup>™</sup></li> <li>• Diskeeper<sup>®</sup> Home</li> <li>• PC-Doctor<sup>™</sup> (diagnostics)</li> <li>• Adobe<sup>®</sup> Reader</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel<sup>®</sup> WinDVD<sup>®</sup> (combo, DVD, DVD±RW)</li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>ThinkVision<sup>®</sup> L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ATI Radeon HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> </ul> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>

See footnotes for important warranty information  
 US models announced August 14, September 25, or October 16, 2007  
 US models withdrawn effective September or October 2008



Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Vista preload	Vista logo	Global Educ	Avail date
A61	9144-BMU	4x3	Sempron LE 1150	2.0	256KB	Single	1GB	80GB <sup>2</sup>	DVD	X1250	Yes		Business32	Basic		Dec 07
A61	9144-BNU	4x3	Sempron LE 1150	2.0	256KB	Single	1GB	160GB	Combo	X1250	Yes	DVI-D	Business32	Basic		Dec 07
A61	9144-D1U	4x3	Sempron LE 1150	2.0	256KB	Single	1GB	160GB	Combo	X1250	Yes		Business32	Basic	Educ	Apr 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Sempron™ LE 1150</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller		<b>Desktop</b>	
Implementation	Processor in 940-pin PGA package in Socket AM2			
Memory	<b>1GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.3" H</li> <li>• 331mm W X 412mm D X 108mm H</li> <li>• 18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, access, open (reader/diskette)                      Bay ③ 3.5", 1" high, no access, std disk</p> <p>Slot 1: Low Profile, PCI Express x1*                      Slot 2: Low Profile, PCI Express x16 (25w max)                      Slot 3: Low Profile, 32-bit PCI 2.3 (5v)                      Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</p> <p>* <i>Some</i>: DVI-D connector on bracket for DVI-D Cable blocks slot</p>	
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector			
DVI-D connector	<i>Some</i> : DVI-D conn on rear bracket to support two monitors (uses DVI-D cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter			
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support			
SATA DVD	<i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> (41N5618)			
SATA Combo	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector			
Diskette drive	None			
Media reader	None			
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, ALC888 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0			
Modem	None			
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key			
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo			
Power supply	220 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® Vista Business Edition (32-bit)			
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some</i>: Education software</li> <li>• VitalSource Library College Edition</li> <li>• Adobe® Instructor Resource Center</li> <li>• Adobe Digital School Collection                             <ul style="list-style-type: none"> <li>– Photoshop Elements 6 (and CD)</li> <li>– Premier Elements 4 (and DVD)</li> <li>– Acrobat 8 Professional (and CD)</li> <li>– Contribute 4 (and CD)</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo, DVD)</li> </ul>			
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984</li> <li>2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985</li> <li>1GB PC2-6400 NP DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 NP DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>USB Portable Diskette Drive 05K9276</li> <li>USB 2.0 Lenovo Multimedia Headset 40Y8518</li> <li>USB 2.0 Lenovo Webcam 40Y8519</li> <li>USB 2.0 Essential Memory Key 32GB 45K1258</li> <li>USB 2.0 Security Memory Key 2GB 41U5119</li> <li>USB 2.0 Security Memory Key 4GB 41U5120</li> <li>USB 2.0 Ultra Secure Memory Key 2GB 45J5916</li> <li>USB 2.0 Ultra Secure Memory Key 4GB 45J5917</li> <li>USB 2.0 Ultra Secure Memory Key 8GB 45J5918</li> <li>USB 2.0 Portable 160GB Hard Disk 43R1784</li> <li>USB 2.0 Super Multi-Burner 41N5565</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ThinkVision® L1700p 17" Monitor 9417HE2</li> <li>ThinkVision L1940p Wide 19" Monitor 4424HB6</li> <li>ThinkVision L2240p Wide 22" Monitor 4422HB6</li> <li>ThinkVision L2440p Wide 24" Monitor 4420HB2</li> <li>Wireless Kbd &amp; Opt Wheel Mouse (via USB) 73P4067</li> <li>Laser Tilt Wheel Mouse (USB, PS/2) 41U3074</li> <li>Kensington Cable Lock from Lenovo 73P2582</li> <li>ATI Radeon HD 2400 Pro 128MB 43R1961</li> <li>ATI Radeon HD 2400 XT 256MB 43R1962</li> <li>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></li> <li>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></li> </ul>	73P4984 73P4985 41U2977 41U2978 41N3015 43R1990 05K9276 40Y8518 40Y8519 45K1258 41U5119 41U5120 45J5916 45J5917 45J5918 43R1784 41N5565 41N5620 9417HE2 4424HB6 4422HB6 4420HB2 73P4067 41U3074 73P2582 43R1961 43R1962		
	Supports ThinkVantage® technologies			
	RoHS-compliant			
	<b>Limited Warranty<sup>1</sup></b>			
	<ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>			

See footnotes for important warranty information  
 US models announced November 13, 2007 or March 25, 2008  
 US models withdrawn effective October 2008

# ThinkCentre® A61 Desktop (9169) - ENERGY STAR® 4.0 - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	L2 cache	Core	Memory	SATA disk	SATA optical	Integrated graphics	Security chip	ENERGY STAR 4.0	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A61	9169-A1U	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB <sup>2</sup>	Combo	X1250	Yes	ES40 XP Pro	3-yr	No	Sep07
A61	9169-A2U	4x3	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250	Yes	ES40 Business32	3-yr	No	Sep07

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Athlon™ 64 X2 4400+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology		<b>Desktop</b>
Implementation	Processor in 940-pin PGA package in Socket AM2		<ul style="list-style-type: none"> <li>Business black color</li> <li>13.0" W X 16.2" D X 4.3" H</li> <li>331mm W X 412mm D X 108mm H</li> <li>18.5 to 20.7lb (8.4 to 9.4kg)</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>
Memory	<b>1GB std</b> , 8GB max <sup>3</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector		<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ③ 3.5", 1" high, no access, std disk</li> </ul>
DVI-D connector	None		
SATA disk	<b>80GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<ul style="list-style-type: none"> <li>Slot 1: Low Profile, PCI Express x1</li> <li>Slot 2: Low Profile, PCI Express x16 (25w max)</li> <li>Slot 3: Low Profile, 32-bit PCI 2.3 (5v)</li> <li>Slot 4: Low Profile, 32-bit PCI 2.3 (5v)</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support		
SATA Combo	CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Unattended start mode</li> <li>Hard disk I/O control</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>EPEAT™ Silver rating ENERGY STAR 4.0-compliant RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service<sup>9</sup></li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9192)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9193)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9194)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9195)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 41C9196)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>Post warranty maintenance services available</li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors		
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, ALC888 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0		
Modem	None		
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key		
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo		
Power supply	220 watts with variable speed fan, autosensing, 80% PSU		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Microsoft® Windows® XP Professional	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	
- <i>Some:</i> Microsoft Windows Vista® Business Edition (32-bit)	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	
◇ <i>Vista model:</i> Vista Basic logo	1GB PC2-6400 NP DDR2 UDIMM	41U2977	
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	2GB PC2-6400 NP DDR2 UDIMM	41U2978	
• Rescue and Recovery™	160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	
• Client Security Solution™	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
• ThinkVantage Productivity Center	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
• ThinkVantage System Update	USB Portable Diskette Drive	05K9276	
• System Migration Assistant	USB 2.0 Lenovo Multimedia Headset	40Y8518	
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Lenovo Webcam	40Y8519	
• Diskeeper® Home	USB 2.0 Essential Memory Key 32GB	45K1258	
• PC-Doctor™ (diagnostics)	USB 2.0 Security Memory Key 2GB	41U5119	
• Adobe® Reader	USB 2.0 Security Memory Key 4GB	41U5120	
• Windows Live™ Toolbar	USB 2.0 Ultra Secure Memory Key 2GB	45J5916	
• Windows Live Search	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	
• Picasa from Google	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	
• Microsoft Office 2007 Trial (60-day)	USB 2.0 Portable 160GB Hard Disk	43R1784	
• Multimedia Center for Think Offerings (combo) (XP)	USB 2.0 Super Multi-Burner Drive	41N5565	
• Sonic RecordNow and Drive Letter Access (combo)	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
• Corel® WinDVD® (combo)	ThinkVision® L1700p 17" Monitor	9417HE2	
	ThinkVision L1940p Wide 19" Monitor	4424HB6	
	ThinkVision L2240p Wide 22" Monitor	4422HB6	
	ThinkVision L2440p Wide 24" Monitor	4420HB2	
	ThinkVision USB Soundbar	40Y7616	
	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	
	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	
	Kensington Cable Lock from Lenovo	73P2582	
	ATI Radeon HD 2400 Pro 128MB	43R1961	
	ATI Radeon HD 2400 XT 256MB	43R1962	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		

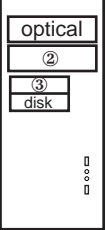
See footnotes for important warranty information  
US models announced August 14, 2007  
US models withdrawn effective June or October 2008

# ThinkCentre® A61 Tower (9120) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Preload	Global Educ	Avail date
A61	9120-A7U	4x4	Athlon 64 3800+	2.4	512KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-A8U	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	160GB	Combo	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-A9U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB	80GB	DVD	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-AAU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-01U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	2GB	80GB	Combo	X1250	Yes	DVI-D	XP Pro	None	Feb 08
A61	9120-ABU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-ADU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	XP Pro	None	Dec 07
A61	9120-ACU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	Yes	DVI-D	XP Pro	None	Dec 07

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning	Quality, reliability and manageability for small/medium businesses		
Processor	<b>AMD® Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4400+</b> or <b>5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology		
Implementation	Processor in 940-pin PGA package in Socket AM2		<b>Tower</b> • Business black color • 6.9" W X 17.3" D X 15.8" H • 175mm W X 440mm D X 402mm H • 20.3 to 24.9lb (9.2 to 11.3kg) • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Slot 1: half-length, full-height, PCI Express x1* Slot 2: half-length, full-height, PCI Express x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v) * DVI-D connector on bracket for DVI-D Cable blocks slot
Memory	<b>512MB, 1GB, or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available		
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one analog VGA DB-15 connector DVI-D connector on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter		
DVI-D connector	DVI-D connector on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter		
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618) <i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)		
SATA controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar		
SATA DVD	None		
SATA Combo	None		
SATA DVD±RW	None		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, ALC888 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0		
Modem	None		
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key		
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® XP Professional with Vista® COA ♦ Disk-to-Disk Recovery (in hidden protected area) <b>Preloaded applications<sup>5</sup></b> (only some listed)			<b>Security</b> • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Unattended start mode • Hard disk I/O control • Serial port I/O control • Parallel port I/O control • Individual USB port disablement Supports ThinkVantage® technologies RoHS-compliant
<b>Accessories</b> 1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ThinkVision® L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ATI Radeon HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
<b>Limited Warranty<sup>1</sup></b> ⇐ 1-year parts and labor ⇐ International Warranty Service <sup>9</sup> ⇐ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ⇐ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 41C9189) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9187) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9190) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 41C9188) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 41C9191) ⇐ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a> ⇐ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378			

See footnotes for important warranty information  
 US models announced November 27, 2007 or February 18, 2008  
 US models withdrawn effective September or December 2008

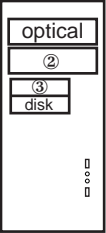
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# ThinkCentre® A61 Tower (9120) - TopSeller (Vista®) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Vista preload	Vista logo	Global Educ	Avail date
A61	9120-A4U	4x4	Sempron 3600+	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	Yes		Home Basic	Basic	No	Aug 07
A61	9120-AGU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	80GB	Combo	X1250	Yes	DVI-D	Business32	Basic	No	May 08
A61	9120-AHU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	Business32	Basic	No	May 08
A61	9120-AJU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	Yes	DVI-D	Business32	Prem	No	May 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability and manageability for small/medium businesses <b>AMD® Sempron™ 3600+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4400+</b> or <b>5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology Processor in 940-pin PGA package in Socket AM2	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 20.3 to 24.9lb (9.2 to 11.3kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation		
Memory	<b>512MB, 1GB, or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector <i>Some:</i> DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter	Slot 1: half-length, full-height, PCI Express x1* Slot 2: half-length, full-height, PCI Express x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)
DVI-D connector	<i>Some:</i> DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter	* <i>Some:</i> DVI-D connector on bracket for DVI-D Cable blocks slot
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618)	
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O	<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, ALC888 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key	Supports ThinkVantage® technologies
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo	RoHS-compliant
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	<b>Limited Warranty<sup>1</sup></b>
- <i>Some:</i> Microsoft® Windows® Vista Home Basic Edition (32-bit)	1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001	↔ <b>1-year parts and labor</b>
- <i>Some:</i> Microsoft Windows Vista Business Edition (32-bit)	2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002	↔ <b>International Warranty Service<sup>9</sup></b>
	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015	↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b>
	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b>
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	USB 2.0 Lenovo Multimedia Headset 40Y8518	• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9189)
• Rescue and Recovery™	USB 2.0 Lenovo Webcam 40Y8519	• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)
• Client Security Solution™	USB 2.0 Essential Memory Key 32GB 45K1258	• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9187)
• ThinkVantage Productivity Center	USB 2.0 Security Memory Key 2GB 41U5119	• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9190)
• ThinkVantage System Update	USB 2.0 Security Memory Key 4GB 41U5120	• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9188)
• System Migration Assistant	USB 2.0 Ultra Secure Memory Key 2GB 45J5916	• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9191)
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Ultra Secure Memory Key 4GB 45J5917	
• Diskeeper® Home	USB 2.0 Ultra Secure Memory Key 8GB 45J5918	
• PC-Doctor™ (diagnostics)	USB 2.0 Portable 160GB Hard Disk 43R1784	
• Adobe® Reader	ThinkVision® L1700p 17" Monitor 9417HE2	
• Windows Live™ Toolbar	ThinkVision L1940p Wide 19" Monitor 4424HB6	
• Windows Live Search	ThinkVision L2240p Wide 22" Monitor 4422HB6	
• Picasa from Google	ThinkVision L2440p Wide 24" Monitor 4420HB2	
• Microsoft Office 2007 Trial (60-day)	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067	
• EarthLink Trial (Vista Home Basic)	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074	
• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)	Kensington Cable Lock from Lenovo 73P2582	
• Corel® WinDVD® (combo, DVD, DVD±RW)	ATI Radeon HD 2400 Pro 128MB 43R1961	
	ATI Radeon HD 2400 XT 256MB 43R1962	
	ATI Radeon HD 2600 XT 512MB 43R1963	
	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

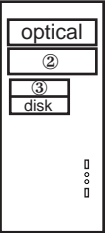
See footnotes for important warranty information  
 US models announced August 14, 2007 or April 15, 2008  
 US models withdrawn effective September or October 2008

# ThinkCentre® A61 Tower (9134) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	DVI-D connector	Preload	Limited warranty <sup>1</sup>	Avail date
A61	9134-AFU	4x4	Athlon 64 3800+	2.4	512KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-AHU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	80GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-A5U	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	512MB	80GB	DVD	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-AJU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	1GB	80GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-A6U	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	512MB	160GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-A8U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB	80GB	DVD	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-AKU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-A9U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	512MB	160GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-01U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	DVI-D	XP Pro	3-yr	Feb 08
A61	9134-ABU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	512MB	80GB	DVD	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-ACU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	512MB	160GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-ALU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	Combo	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-AMU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	250GB	DVD±RW	X1250	DVI-D	XP Pro	3-yr	Aug 07
A61	9134-ANU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	160GB	Combo	X1250	DVI-D	XP Pro	3-yr	Oct 07
A61	9134-APU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	DVI-D	XP Pro	3-yr	Oct 07

• These small and medium business (SMB) models are part of the US TopSeller™ Program

Positioning Processor	Quality, reliability and manageability for small/medium businesses <b>AMD® Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4000+, 4400+, 4800+, or 5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology	<b>Tower</b> • Business black color • 6.9" W X 17.3" D X 15.8" H • 175mm W X 440mm D X 402mm H • 20.3 to 24.9lb (9.2 to 11.3kg) • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention	
Implementation	Processor in 940-pin PGA package in Socket AM2		
Memory	<b>512MB, 1GB, or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one analog VGA DB-15 connector	Slot 1: half-length, full-height, PCI Express x1* Slot 2: half-length, full-height, PCI Express x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
DVI-D connector	DVI-D connector on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter	* DVI-D connector on bracket for DVI-D Cable blocks slot	
SATA disk	<b>80, 160, or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618)		
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, ALC888 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0		
Modem	None		
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key		
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo		
Power supply	280 watts with variable speed fan, manual switch		
			<b>Security</b> • Security chip (see information on left) • One lock to secure both cover and entire system to fixed object: - Padlock loop (in rear for opt padlock) - Security slot (in rear for optional Kensington® Microsaver® cable) • Power-on password • Administrator password • Hard disk password • Boot sequence control • Boot without keyboard, mouse, diskette • Unattended start mode • Hard disk I/O control • Serial port I/O control • Parallel port I/O control • Individual USB port disablement
			Supports ThinkVantage® technologies
			RoHS-compliant

<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® XP Professional with Vista® COA ♦ Disk-to-Disk Recovery (in hidden protected area)	<b>Accessories</b> 1GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2001 2GB PC2-5300 DDR2 UDIMM (TopSeller) 43R2002 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable Secure 320GB Hard Disk 43R2019 ThinkVision® L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ATI Radeon HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	<b>Limited Warranty<sup>1</sup></b> ⇐ <b>3-year parts and labor</b> ⇐ <b>International Warranty Service<sup>9</sup></b> ⇐ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇐ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇐ <b>Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇐ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>
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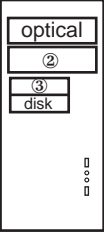
See footnotes for important warranty information  
US models announced August 14, 2007, September 25, 2007, or February 18, 2008  
US models withdrawn effective June, September, October, or December 2008

# ThinkCentre® A61 Tower (9134) - TopSeller (Vista®) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Vista preload	Vista logo	Global Educ	Avail date
A61	9134-AGU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	80GB <sup>2</sup>	Combo	X1250	Yes	DVI-D	Bus32	Basic	No	Aug 07
A61	9134-AAU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250	Yes	DVI-D	Bus32	Basic	No	Aug 07
A61	9134-ARU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	160GB	Combo	X1250	Yes	DVI-D	Bus32	Basic	No	May 08
A61	9134-ASU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	2GB	160GB	DVD±RW	X1250	Yes	DVI-D	Bus32	Prem	No	May 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>

Positioning	Quality, reliability and manageability for small/medium businesses		<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 20.3 to 24.9lb (9.2 to 11.3kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 																																																			
Processor	<b>AMD® Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4400+ or 5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology																																																					
Implementation	Processor in 940-pin PGA package in Socket AM2																																																					
Memory	<b>1GB or 2GB std</b> , 8GB max <sup>8</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available																																																					
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector																																																					
DVI-D connector	DVI-D connector on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter																																																					
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support SATA Combo <i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive SATA DVD±RW <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620) SATA cables Two SATA cables (each 1-drop to device), four SATA connectors on planar EIDE controller Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar Diskette drive None Media reader None																																																					
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O																																																					
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																					
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D)																																																					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																																					
Audio	High Definition (HD) Audio, ALC888 codec																																																					
Speaker	One internal speaker for business audio																																																					
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0																																																					
Modem	None																																																					
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key																																																					
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo																																																					
Power supply	280 watts with variable speed fan, manual switch																																																					
<b>Preloaded operating system<sup>20</sup></b> - Microsoft® Windows® Vista Business Edition (32-bit)			<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																																																			
<b>Preloaded applications<sup>5</sup></b> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Sonic RecordNow and Drive Letter Access (combo, DVD±RW)</li> <li>• Corel® WinDVD® (combo, DVD±RW)</li> </ul>																																																						
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<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																						

See footnotes for important warranty information  
 US models announced August 14, 2007 or April 15, 2008  
 US models withdrawn effective September or October 2008

# ThinkCentre® A61 Tower (9143) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>9</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A61	9143-AGU	4x4	Sempron 3600+	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9143-APU	4x4	Sempron 3600+	2.0	256KB	Single	1GB	80GB	Combo	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9143-BAU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	80GB	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07
A61	9143-ASU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	1GB	80GB	DVD	X1250	Yes	XP Pro	3-yr	None	Aug 07

Positioning	<i>Mainstream enterprise stability and manageability</i>	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>20.3 to 24.9lb (9.2 to 11.3kg)</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>																																																							
Processor	<b>AMD® Sempron™ 3600+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4000+</b> with <b>dual-core</b> , integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology																																																								
Implementation	Processor in 940-pin PGA package in Socket AM2																																																								
Memory	<b>512MB</b> or <b>1GB std</b> , 8GB max <sup>3</sup> , <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																																																							
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector	Slot 1: half-length, full-height, PCI Express x1 Slot 2: half-length, full-height, PCI Express x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)																																																							
DVI-D connector	None																																																								
SATA disk	<b>80GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts																																																								
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support																																																								
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive (41N5618)																																																								
SATA Combo	<i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive (41N5619)																																																								
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar																																																								
EIDE controller	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar																																																								
Diskette drive	None																																																								
Media reader	None																																																								
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O																																																								
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																																																								
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)																																																								
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																																								
Audio	High Definition (HD) Audio, ALC888 codec																																																								
Speaker	One internal speaker for business audio																																																								
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0																																																								
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Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																								
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key		Supports ThinkVantage® technologies																																																						
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo																																																								
Power supply	280 watts with variable speed fan, manual switch		RoHS-compliant																																																						
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>Microsoft® Windows® XP Professional with Vista® COA</li> <li>◆ Disk-to-Disk Recovery (in hidden protected area)</li> </ul>																																																								
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>System Migration Assistant</li> <li>Norton Internet Security™ (90 days of virus definitions)</li> <li>Diskeeper® Home</li> <li>PC-Doctor™ (diagnostics)</li> <li>Adobe® Reader</li> <li>Windows Live™ Toolbar</li> <li>Windows Live Search</li> <li>Picasa from Google</li> <li>Microsoft Office 2007 Trial (60-day)</li> <li>Multimedia Center for Think Offerings (combo, DVD)</li> <li>Sonic RecordNow and Drive Letter Access (combo)</li> <li>Corel® WinDVD® (combo, DVD)</li> </ul>	<b>Accessories</b> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 4GB</td><td>45J7904</td></tr> <tr><td>USB 2.0 Essential Memory Key 8GB</td><td>45J7905</td></tr> <tr><td>USB 2.0 Security Memory Key 2GB</td><td>41U5119</td></tr> <tr><td>USB 2.0 Security Memory Key 4GB</td><td>41U5120</td></tr> <tr><td>USB 2.0 Portable 120GB Hard Disk</td><td>41N8379</td></tr> <tr><td>USB 2.0 Super Multi-Burner Drive</td><td>41N5565</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L197 Wide 19" LCD Monitor</td><td>4434HE1</td></tr> <tr><td>ThinkVision L220p Wide 20.1" LCD Monitor</td><td>4438HB6</td></tr> <tr><td>ThinkVision L220x Wide 22" LCD Monitor</td><td>4433HB2</td></tr> <tr><td>ThinkVision USB Soundbar</td><td>40Y7616</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ATI Radeon HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> <tr><td>Acc Guide in pdf</td><td><a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></td></tr> <tr><td>Other accessories at</td><td><a href="http://lenovo.com/accessories">lenovo.com/accessories</a></td></tr> </table>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 4GB	45J7904	USB 2.0 Essential Memory Key 8GB	45J7905	USB 2.0 Security Memory Key 2GB	41U5119	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 Portable 120GB Hard Disk	41N8379	USB 2.0 Super Multi-Burner Drive	41N5565	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L197 Wide 19" LCD Monitor	4434HE1	ThinkVision L220p Wide 20.1" LCD Monitor	4438HB6	ThinkVision L220x Wide 22" LCD Monitor	4433HB2	ThinkVision USB Soundbar	40Y7616	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ATI Radeon HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	Acc Guide in pdf	<a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	Other accessories at	<a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
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			<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																						

See footnotes for important warranty information  
 US models announced August 14, 2007  
 US models withdrawn effective June or September 2008

# ThinkCentre® A61 Tower (9143) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core	Memory <sup>3</sup>	SATA disk	SATA optical	Graphics	DVI-D conn	Chassis intr switch	Vista preload	Vista logo	Global Educ	Avail date
A61	9143-AHU	4x4	Sempron 3600+	2.0	256KB	Single	512MB	80GB <sup>2</sup>	DVD	X1250			Bus32	Basic		Aug 07
A61	9143-ALU	4x4	Athlon 64 3800+	2.4	512KB	Single	1GB	160GB	Combo	X1250			Bus32	Premium		Aug 07
A61	9143-BBU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	1GB	80GB	DVD	X1250	DVI-D		Bus32	Basic	Gbl	Aug 07
A61	9143-AMU	4x4	Athlon 64 X2 4000+	2.1	2x512KB	Dual	1GB	80GB	DVD	X1250			Bus32	Premium		Aug 07
A61	9143-BCU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	DVD	X1250	DVI-D		Bus32	Basic	Gbl	Aug 07
A61	9143-ANU	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual	1GB	80GB	Combo	X1250			Bus32	Premium		Aug 07
A61	9143-BDU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	80GB	Combo	X1250	DVI-D		Bus32	Basic		Aug 07
A61	9143-AQU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD±RW	X1250			Bus32	Premium		Aug 07
A61	9143-ARU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD±RW	X1250			Bus64	Premium		Nov 07
A61	9143-BEU	4x4	Athlon 64 X2 4800+	2.5	2x512KB	Dual	1GB	160GB	DVD±RW	X1300	DVI-D Switch		Bus32	Basic		Aug 07
A61	9143-BGU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	80GB	DVD	X1250			Bus32	Basic		Oct 07
A61	9143-BHU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	80GB	Combo	X1250	DVI-D		Bus32	Basic		Oct 07
A61	9143-BJU	4x4	Athlon 64 X2 5000+	2.6	2x512KB	Dual	1GB	160GB	DVD±RW	X1250	DVI-D		Bus32	Basic		Oct 07

<p>Positioning Processor</p> <p>Implementation</p> <p>Memory</p> <p>Graphics (one of following)</p> <p>DVI-D connector</p>	<p><i>Mainstream enterprise stability and manageability</i></p> <p><b>AMD® Sempron™ 3600+</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 3800+</b> with single-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology or <b>AMD Athlon 64 X2 4000+, 4400+, 4800+, or 5000+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology</p> <p>Processor in 940-pin PGA package in Socket AM2</p> <p><b>512MB or 1GB std, 8GB max<sup>3</sup>, PC2-5300 667MHz DDR2,</b> non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p> <p>• <b>ATI™ Radeon™ X1250,</b> integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector</p> <p>• <b>ATI Radeon X1300,</b> PCI Express x16 adapter, ATI Avivo™, 256MB 400MHz DDR2, 400MHz RAMDAC, S-Video out, dual head support (analog DB-15 and digital DVI-I conn via dongle)</p> <p><i>Some:</i> DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 20.3 to 24.9lb (9.2 to 11.3kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCI Express x1*</p> <p>Slot 2: half-length, full-height, PCI Express x16 (75w max)</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)</p> <p>* <i>Some:</i> DVI-D connector on bracket for DVI-D Cable blocks slot</p>	
<p>SATA disk</p> <p>SATA controller</p> <p>SATA DVD</p> <p>SATA Combo</p> <p>SATA DVD±RW</p> <p>SATA cables</p> <p>EIDE controller</p> <p>Diskette drive</p> <p>Media reader</p> <p>Chipset</p> <p>Front ports</p> <p>Rear ports</p> <p>Rear audio ports</p> <p>Audio</p> <p>Speaker</p> <p>Ethernet</p> <p>Modem</p> <p>Security chip</p> <p>Keyboard</p> <p>Mouse</p> <p>Power supply</p>	<p><b>80GB or 160GB,</b> SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p> <p>Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support</p> <p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive (41N5618)</p> <p><i>Some:</i> CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p> <p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive (41N5620)</p> <p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p> <p>Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector on planar</p> <p>None</p> <p>None</p> <p><b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p> <p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)</p> <p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p> <p>High Definition (HD) Audio, ALC888 codec</p> <p>One internal speaker for business audio</p> <p>Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0</p> <p>None</p> <p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p> <p>Preferred Pro USB Keyboard (USB connector), 104-key</p> <p>Optical Wheel Mouse (USB only), black, Lenovo logo</p> <p>280 watts with variable speed fan, manual switch</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>↪ <b>Other ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced August 14, September 25, or October 16, 2007  
 US models withdrawn effective September 2007, September 2008, or October 2008

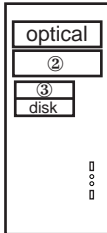


# ThinkCentre® A61 Tower (9143) - Vista® (November 2007) - withdrawn

Personal Systems Reference (PSREF)

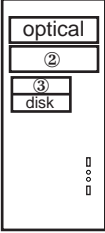
Name	Type-model	Slot x bay	AMD processor	GHz	L2 cache	Core Memory	SATA disk	SATA optical	Integrated graphics	Security chip	DVI-D connector	Vista preload	Vista logo	Global Educ	Avail date
A61	9143-BRU	4x4	Sempron LE 1150	2.0	256KB	Single 1GB	80GB <sup>2</sup>	DVD	X1250	Yes		Bus32	Basic		Dec 07
A61	9143-BSU	4x4	Sempron LE 1150	2.0	256KB	Single 1GB	160GB	Combo	X1250	Yes	DVI-D	Bus32	Basic		Dec 07
A61	9143-D1U	4x4	Athlon 64 X2 4400+	2.3	2x512KB	Dual 1GB	160GB	Combo	X1250	Yes		Bus32	Basic	Educ	Apr 08

- These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Mainstream enterprise stability and manageability</i> <b>AMD® Sempron™ LE 1150</b> with single-core, integrated L1/L2 cache, AMD64, and integrated DDR2 memory controller or <b>AMD Athlon™ 64 X2 4400+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology		<b>Tower</b> • Business black color • 6.9" W X 17.3" D X 15.8" H • 175mm W X 440mm D X 402mm H • 20.3 to 24.9lb (9.2 to 11.3kg) • Handle on top front • Toolless cover removal • Toolless disk, diskette drive, optical drive removal • Toolless adapter retention	
Implementation	Processor in 940-pin PGA package in Socket AM2			
Memory	<b>1GB std, 8GB max<sup>8</sup>, PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; 3 sockets available			
Graphics	<b>ATI™ Radeon™ X1250</b> , integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector <i>Some</i> : DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter			
DVI-D connector	<i>Some</i> : DVI-D conn on rear bracket to support two monitors (uses DVI-D Cable attached to DVI header on planar [SurroundView™]); supports up to 4 monitors with opt dual head ATI graphics adapter			
SATA disk	<b>80GB or 160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support <i>Some</i> : DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> (41N5618)		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk	
SATA controller	<i>Some</i> : CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive		Slot 1: half-length, full-height, PCI Express x1* Slot 2: half-length, full-height, PCI Express x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 (5v) Slot 4: half-length, full-height, 32-bit PCI 2.3 (5v)	
SATA DVD	<i>Some</i> : Two SATA cables (each 1-drop to device), four SATA connectors		* <i>Some</i> : DVI-D connector on bracket for DVI-D Cable blocks slot	
SATA Combo	Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector			
SATA cables	None			
EIDE controller	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15, DVI-D in some models)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, ALC888 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0			
Modem	None			
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key			
Mouse	Optical Wheel Mouse (USB only), black, Lenovo logo			
Power supply	280 watts with variable speed fan, universal, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	- Microsoft® Windows® Vista Business Edition (32-bit)			
<b>Preloaded applications<sup>5</sup></b>	• <i>Some</i> : Education software - VitalSource Library College Edition - Adobe® Instructor Resource Center - Adobe Digital School Collection – Photoshop Elements 6 (and CD) – Premier Elements 4 (and DVD) – Acrobat 8 Professional (and CD) – Contribute 4 (and CD) • Rescue and Recovery™ • Client Security Solution™ • ThinkVantage Productivity Center • ThinkVantage System Update • System Migration Assistant • Norton Internet Security™ (90 days of virus definitions) • Diskeeper® Home • PC-Doctor™ (diagnostics) • Adobe Reader • Windows Live™ Toolbar • Windows Live Search • Picasa from Google • Microsoft Office 2007 Trial (60-day) • Sonic RecordNow and Drive Letter Access (combo) • Corel® WinDVD® (combo, DVD)			
<b>Accessories</b>	1GB PC2-5300 CL5 NP DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 NP DDR2 UDIMM 73P4985 1GB PC2-6400 NP DDR2 UDIMM 41U2977 2GB PC2-6400 NP DDR2 UDIMM 41U2978 250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 USB Portable Diskette Drive 05K9276 USB 2.0 Lenovo Multimedia Headset 40Y8518 USB 2.0 Lenovo Webcam 40Y8519 USB 2.0 Essential Memory Key 32GB 45K1258 USB 2.0 Security Memory Key 2GB 41U5119 USB 2.0 Security Memory Key 4GB 41U5120 USB 2.0 Ultra Secure Memory Key 2GB 45J5916 USB 2.0 Ultra Secure Memory Key 4GB 45J5917 USB 2.0 Ultra Secure Memory Key 8GB 45J5918 USB 2.0 Portable 160GB Hard Disk 43R1784 USB 2.0 Super Multi-Burner 41N5565 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L1700p 17" Monitor 9417HE2 ThinkVision L1940p Wide 19" Monitor 4424HB6 ThinkVision L2240p Wide 22" Monitor 4422HB6 ThinkVision L2440p Wide 24" Monitor 4420HB2 Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067 Laser Tilt Wheel Mouse (USB, PS/2) 41U3074 Kensington Cable Lock from Lenovo 73P2582 ATI Radeon HD 2400 Pro 128MB 43R1961 ATI Radeon HD 2400 XT 256MB 43R1962 ATI Radeon HD 2600 XT 512MB 43R1963 Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
				Supports ThinkVantage® technologies
				RoHS-compliant
				<b>Limited Warranty<sup>1</sup></b> ⇒ <b>3-year parts and labor</b> ⇒ <b>International Warranty Service<sup>9</sup></b> ⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> • <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192) • <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193) • <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194) • <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195) • <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196) ⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b> ⇒ <b>Post warranty maintenance services available</b> ⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>

See footnotes for important warranty information  
US models announced November 13, 2007 or March 25, 2008  
US models withdrawn effective October 2008

Name	Type-model	Slot x bay	AMD processor	L2 cache GHz	Core Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Security chip	ENERGY STAR 4.0 Preload	Limited warranty <sup>1</sup>	Global Educ	Avail date
A61	9171-A1U	4x4	Athlon 64 X2 4400+	2.3	2x512KB Dual	1GB	160GB <sup>2</sup>	Combo	X1250	Yes	ES40 XP Pro	3-yr	No Sep 07
A61	9171-A2U	4x4	Athlon 64 X2 4400+	2.3	2x512KB Dual	1GB	160GB	Combo	X1250	Yes	ES40 Bus32	3-yr	No Sep 07

<p>Positioning Processor <i>Mainstream enterprise stability and manageability</i> <b>AMD® Athlon™ 64 X2 4400+</b> with dual-core, integrated L1/L2 cache, AMD64, integrated DDR2 memory controller, and virtualization technology</p> <p>Implementation Processor in 940-pin PGA package in Socket AM2</p> <p>Memory <b>1GB std</b>, 8GB max<sup>8</sup>, <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics:</i> standard memory in one socket; 3 sockets available</p> <p>Graphics <b>ATI™ Radeon™ X1250</b>, integrated graphics in 690G, uses main memory (up to 256MB), one 15-pin analog D-sub connector</p> <p>DVI-D connector None</p> <p>SATA disk <b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p> <p>SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB600, RAID 0/1 support</p> <p>SATA Combo CD-RW/DVD-ROM Combo SATA 1.5Gb/s Drive</p> <p>SATA cables Two SATA cables (each 1-drop to device), four SATA connectors</p> <p>EIDE controller Enhanced IDE, ATA-133, integrated in SB600, one EIDE connector</p> <p>Diskette drive None</p> <p>Media reader None</p> <p>Chipset <b>AMD 690G Chipset</b> with HyperTransport™ 1.0 and PCI Express® 1.1 support; SB600 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p> <p>Front ports Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p> <p>Rear ports Four USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (DB-15)</p> <p>Rear audio ports Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p> <p>Audio High Definition (HD) Audio, ALC888 codec</p> <p>Speaker One internal speaker for business audio</p> <p>Ethernet Gigabit ethernet on planar, Marvell® 88E8071, PCIe x1, Wake on LAN®, ASF 2.0</p> <p>Modem None</p> <p>Security chip Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p> <p>Keyboard Preferred Pro USB Keyboard (USB connector), 104-key</p> <p>Mouse Optical Wheel Mouse (USB only), black, Lenovo logo</p> <p>Power supply 280 watts with variable speed fan, autosensing, 80% PSU</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 20.3 to 24.9lb (9.2 to 11.3kg)</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>  <p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length,full-height, PCI Express x1</p> <p>Slot 2: half-length,full-height, PCI Express x16 (75w max)</p> <p>Slot 3: half-length,full-height, 32-bit PCI 2.3 (5v)</p> <p>Slot 4: half-length,full-height, 32-bit PCI 2.3 (5v)</p>																																																											
<p><b>Preloaded operating system</b><sup>20</sup></p> <ul style="list-style-type: none"> <li>- Some: Microsoft® Windows® XP Professional</li> <li>- Some: Microsoft Windows Vista® Business Edition (32-bit)</li> <li>✦ Vista model: Vista Basic logo</li> </ul> <p><b>Preloaded applications</b><sup>5</sup> (all OSes)</p> <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• System Migration Assistant</li> <li>• Norton Internet Security™ (90 days of virus definitions)</li> <li>• Diskeeper® Home</li> <li>• PC-Doctor™ (diagnostics)</li> <li>• Adobe® Reader</li> <li>• Windows Live™ Toolbar</li> <li>• Windows Live Search</li> <li>• Picasa from Google</li> <li>• Microsoft Office 2007 Trial (60-day)</li> <li>• Multimedia Center for Think Offerings (combo) (XP)</li> <li>• Sonic RecordNow and Drive Letter Access (combo)</li> <li>• Corel® WinDVD® (combo)</li> </ul>	<p><b>Accessories</b></p> <table border="0"> <tr><td>1GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4984</td></tr> <tr><td>2GB PC2-5300 CL5 NP DDR2 UDIMM</td><td>73P4985</td></tr> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Security Memory Key 2GB</td><td>41U5119</td></tr> <tr><td>USB 2.0 Security Memory Key 4GB</td><td>41U5120</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 2GB</td><td>45J5916</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 4GB</td><td>45J5917</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Super Multi-Burner Drive</td><td>41N5565</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L1700p 17" Monitor</td><td>9417HE2</td></tr> <tr><td>ThinkVision L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>ThinkVision USB Soundbar</td><td>40Y7616</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ATI Radeon HD 2400 Pro 128MB</td><td>43R1961</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 2600 XT 512MB</td><td>43R1963</td></tr> </table> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Security Memory Key 2GB	41U5119	USB 2.0 Security Memory Key 4GB	41U5120	USB 2.0 Ultra Secure Memory Key 2GB	45J5916	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Super Multi-Burner Drive	41N5565	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1700p 17" Monitor	9417HE2	ThinkVision L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	ThinkVision USB Soundbar	40Y7616	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ATI Radeon HD 2400 Pro 128MB	43R1961	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 2600 XT 512MB	43R1963	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Unattended start mode</li> <li>• Hard disk I/O control</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
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		<p><b>Limited Warranty</b><sup>1</sup></p> <ul style="list-style-type: none"> <li>➞ <b>3-year parts and labor</b></li> <li>➞ <b>International Warranty Service</b><sup>9</sup></li> <li>➞ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>➞ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 41C9192)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9193)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 41C9194)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 41C9195)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 41C9196)</li> </ul> </li> <li>➞ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>➞ <b>Post warranty maintenance services available</b></li> <li>➞ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																										

See footnotes for important warranty information  
 US models announced August 14, 2007  
 US models withdrawn effective June or October 2008

## Partial list of accessories supported on ThinkCentre A61

## Memory

Tower 9120/9134 support:

1GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2001	ann 03/25/08
2GB PC2-5300 DDR2 UDIMM (TopSeller)	43R2002	ann 03/25/08

All:

512MB PC2-5300 CL5 NP DDR2 UDIMM	73P4983	ann 06/28/05
1GB PC2-5300 CL5 NP DDR2 UDIMM	73P4984	ann 06/28/05
2GB PC2-5300 CL5 NP DDR2 UDIMM	73P4985	ann 09/26/06
512MB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2976	ann 09/26/06
1GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2977	ann 09/26/06
2GB PC2-6400 NP DDR2 UDIMM <sup>48</sup>	41U2978	ann 01/08/08

<sup>48</sup> When PC2-6400 is installed with systems that have PC2-5300 memory, PC2-6400 will operate at the PC2-5300 memory speed.

## Optical

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

## Storage and removable storage

80GB SATA 3.0Gb/s Disk (7200 rpm)	09N4253	ann 05/19/03
160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	ann 05/19/03
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07

USB Portable Diskette Drive	05K9276	ann 06/05/00
USB 2.0 Essential Memory Key 1GB	41U4940	ann 01/23/07
USB 2.0 Essential Memory Key 2GB	41U4944	ann 01/23/07
USB 2.0 Essential Memory Key 4GB	45J7904	ann 06/24/08
USB 2.0 Essential Memory Key 8GB	45J7905	ann 07/15/08
USB 2.0 Essential Memory Key 32GB	45K1258	ann 10/28/08
USB 2.0 Security Memory Key 1GB	41U5118	ann 07/17/07
USB 2.0 Security Memory Key 2GB	41U5119	ann 07/17/07
USB 2.0 Security Memory Key 4GB	41U5120	ann 07/17/07
USB 2.0 Ultra Secure Memory Key 1GB	45J5915	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 2GB	45J5916	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 4GB	45J5917	ann 08/26/08
USB 2.0 Ultra Secure Memory Key 8GB	45J5918	ann 08/26/08
USB 2.0 Portable 160GB Hard Disk	43R1784	ann 09/23/08
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y8637	ann 01/05/06
USB 2.0 Super Multi-Burner Drive	41N5565	ann 01/23/07

## Graphics

Desktop 9144/9169 support Low Profile 25 watts max:

ATI™ Radeon™ HD 2400 Pro 128MB	43R1961	ann 11/06/07
ATI Radeon HD 2400 XT 256MB	43R1962	ann 11/06/07

Tower 9120/9134/9143/9171 support 75 watts max:

ATI Radeon HD 2400 Pro 128MB	43R1961	ann 11/06/07
ATI Radeon HD 2400 XT 256MB	43R1962	ann 11/06/07
ATI Radeon HD 2600 XT 512MB	43R1963	ann 11/06/07

## Keyboard

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	ann 12/07/04
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05

## Mouse

Optical Wheel Mouse (USB)	06P4069	ann 05/21/03
Optical ScrollPoint® Mouse (USB, PS/2)	31P7405	ann 08/27/02
Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse (blk, via USB)	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse (red, via USB)	51J0198	ann 11/25/08

## Multimedia

USB 2.0 Lenovo Multimedia Headset	40Y8518	ann 06/27/06
USB 2.0 Lenovo Webcam	40Y8519	ann 08/29/06

## Security

Kensington® Cable Lock from Lenovo	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

## Monitors

ThinkVision® L174 17" Monitor	9227AE1	ann 04/15/08
ThinkVision L1700p 17" Monitor	9417HE2	ann 09/17/08
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1940p Wide 19" Monitor	4424HB6	ann 09/17/08
ThinkVision L200p Wide 20.1" Monitor	4438HB6	ann 04/15/08
ThinkVision L2240p Wide 22" Monitor	4422HB6	ann 09/17/08
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08
ThinkVision L2440x Wide 24" Monitor	4421HB2	ann 09/17/08

Monitor Accessories<sup>46</sup>

ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar (L1900p, 24" Wide)	45K1263	ann 09/16/08
Kensington Cable Lock from Lenovo	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Radial Arm	19K4464	ann 05/05/00

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

## Medialess License Key (MLK)

Microsoft® Office 2007 Basic, English	43R1528	ann 01/31/07
Microsoft Office 2007 Small Business, Engl	43R1534	ann 01/31/07
Microsoft Office 2007 Professional, English	43R1531	ann 01/31/07

Other accessories at <http://www.lenovo.com/accessories>Accessories Guide pdf at <http://www.lenovo.com/accessoriesguide>Need to buy accessories no longer marketed by Lenovo? See <http://www.itxchange.com/lenovo> for the Options Continuation Program.ThinkPlus™.7 service upgrade options<sup>7</sup> for 1-year warranty models:

1-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9189
2-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9187
2-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9190
3-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9188
3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9191

ThinkPlus™.7 service upgrade options<sup>7</sup> for 3-year warranty models:

3-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9192
3-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9193
4-year Lenovo Onsite Repair (LOR) 9x5 Next Business Day	41C9194
4-year Lenovo Onsite Repair (LOR) 9x5 4 hour response	41C9195
4-year Lenovo Onsite Repair (LOR) 24x7 4 hour response	41C9196

Post-warranty annual maintenance agreements at [lenovo.com/thinkplus/warranty](http://lenovo.com/thinkplus/warranty)



Lenovo ThinkCentre A62 Desktop with four Lenovo ThinkVision monitors



Lenovo ThinkCentre A62 Tower



Lenovo ThinkCentre A62 Desktop



Lenovo ThinkCentre A62 Tower and Lenovo ThinkCentre A62 Desktop



Lenovo ThinkCentre A62 Desktop with Lenovo ThinkVision L193p monitor



Lenovo ThinkCentre A62 Tower with Lenovo ThinkVision L193p monitor

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor connectors	Preload	Global Educ	Avail date
A62	9945-A6U	4x3	Sempron LE-1300	2.3	Single	1GB	160GB <sup>2</sup>	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9945-A5U	4x3	Athlon 1640B	2.7	Single	1GB	160GB	DVD	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9945-A7U	4x3	Athlon X2 5000B	2.6	Dual	1GB	250GB	DVD	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9945-A3U	4x3	Athlon X2 5000B	2.6	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09
A62	9945-A8U	4x3	Athlon X2 5400B	2.8	Dual	1GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9945-A9U	4x3	Phenom X3 8600B	2.3	Triple	2GB	250GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9945-A4U	4x3	Phenom X3 8600B	2.3	Triple	4GB	500GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Quality, reliability, and manageability for small/medium businesses</i></p> <p><b>AMD® Sempron™ Processor LE-1300</b> with single-core, integrated DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 5000B</b> or <b>5400B</b> with <b>dual-core</b>, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with <b>triple-core</b>, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+</p>	<p><b>Desktop</b></p> <div style="border: 1px solid black; padding: 2px; display: inline-block;"> </div> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 3.5", 1" high, access, open*                  Bay ③ 3.5", 1" high, no access, std disk</p> <p>* supports reader/diskette/2nd disk</p> <p>Slot 1: Low Profile, PCI Express 2.0 x1                  Slot 2: Low Profile, PCI Express 2.0 x16 (35w max)                  Slot 3: Low Profile, 32-bit PCI 2.3                  Slot 4: Low Profile, 32-bit PCI 2.3</p>												
Implementation														
Memory	<p><b>1GB, 2GB, or 4GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available</p>													
Graphics	<p><b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</p>													
SATA disk	<p><b>160GB, 250GB, or 500GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>													
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support</p>													
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>													
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>													
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>													
eSATA port	None													
EIDE controller	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>													
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>													
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)</p>													
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>													
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>													
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>													
Speaker	<p>One internal speaker for business audio</p>													
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0</p>													
Modem	None													
Security chip	<p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p>												
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>													
Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>													
Power supply	<p>220 watts with variable speed fan, manual switch</p>													
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</p>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td> <td>41N5618</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> </table> <p>More accessories on O-A62 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
1GB PC2-6400 DDR2 UDIMM	41U2977													
2GB PC2-6400 DDR2 UDIMM	41U2978													
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990													
DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618													
Super Multi-Burner DL DVD±RW SATA Drive	41N5620													
ATI Radeon HD 3470 256MB (DP, VGA)	45K1636													
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↔ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>												

See footnotes for important warranty information  
 US models announced June 2 or July 7, 2009  
 US models withdrawn effective March 2010

# ThinkCentre® A62 Desktop (9486) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	Preload	Global Educ	Avail date
<b>A62</b>	9486-F1U	4x3	Athlon 1640B	2.7	Single	1GB	160GB <sup>2</sup>	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F2U	4x3	Athlon X2 5000B	2.6	Dual	1GB	160GB	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F3U	4x3	Athlon X2 5000B	2.6	Dual	1GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F4U	4x3	Athlon X2 5000B	2.6	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-J8U	4x3	Athlon X2 5000B	2.6	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09
<b>A62</b>	9486-F5U	4x3	Athlon X2 5000B	2.6	Dual	2GB	250GB	DVD±RW	<b>9300GE</b>	DVI-I	XP Pro	None	Sep 08
<b>A62</b>	9486-F6U	4x3	Athlon X2 5400B	2.8	Dual	1GB	160GB	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F7U	4x3	Athlon X2 5400B	2.8	Dual	2GB	250GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F8U	4x3	Phenom X3 8450	2.1	Triple	1GB	250GB	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9486-F9U	4x3	Phenom X3 8450	2.1	Triple	2GB	160GB	DVD±RW	<b>9300GE</b>	DVI-I	XP Pro	None	Sep 08
<b>A62</b>	9486-J6U	4x3	Phenom X3 8600B	2.3	Triple	1GB	160GB	DVD	3100	VGA, DVI-D	XP Pro	None	Jun 09
<b>A62</b>	9486-J7U	4x3	Phenom X3 8600B	2.3	Triple	2GB	160GB	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09

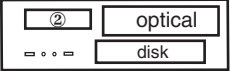
• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Stability and manageability for large enterprise and mid-market</i> <b>AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 5000B or 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8450 or 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+	<b>Desktop</b>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>
Implementation		
Memory	<b>1GB or 2GB std.</b> , 8GB max <sup>8</sup> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available; <i>F8U/F9U:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel; <i>Others:</i> <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, open* Bay ③ 3.5", 1" high, no access, std disk * supports reader/diskette/2nd disk
Graphics	<i>Some:</i> <b>ATI™ Radeon™ 3100</b> , int graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D conn, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI graphics adapter <i>Some:</i> <b>NVIDIA® GeForce® 9300 GE</b> , PCI Express® x16 adapter, 256MB, one DVI-I connector (includes DVI-to-VGA dongle), S-Video out for TV-out, HDCP, DirectX 10, 30 watts	Slot 1: Low Profile, PCI Express 2.0 x1 Slot 2: Low Profile, PCI Express 2.0 x16 (35w max)** Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3 ** used in some models
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	Supports ThinkVantage® technologies
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>F5U/F9U:</i> monitor (DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15, DVI-D)	GREENGUARD® certified RoHS-compliant
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b></li> </ul>
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	220 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-5300 CL5 DDR2 UDIMM	73P4984
	2GB PC2-5300 CL5 DDR2 UDIMM	73P4985
	1GB PC2-6400 DDR2 UDIMM	41U2977
	2GB PC2-6400 DDR2 UDIMM	41U2978
<b>Preloaded applications<sup>5</sup></b> (only some listed)	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990
• Rescue and Recovery™	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618
• Client Security Solution™	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
• McAfee® VirusScan® Plus (30-day)	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
• Microsoft® Office 2007 Trial (60-day)	More accessories on O-A62 sheet	
• Roxio® Creator® Business Edition (DVD±RW)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Roxio MyDVD® (DVD±RW)	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Corel® WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information  
US models announced September 9, 2008 or June 2, 2009  
US models withdrawn effective July 2009, August 2009, or March 2010

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	Preload	Global Educ	Avail date
A62	9486-K1U	4x3	Athlon X2 5400B	2.8	Dual	2GB	250GB <sup>2</sup>	DVD±RW	3100	VGA, DVI-D	XP Pro	Educ	Jul 09
A62	9486-J9U	4x3	Phenom X3 8600B	2.3	Triple	2GB	250GB	DVD±RW	3100	VGA, DVI-D	XP Pro	Educ	Jul 09

- *These models have a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<i>Stability and manageability for large enterprise and mid-market</i> <b>AMD® Athlon™ X2 Dual-Core Processor 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+		<b>Desktop</b>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, open* Bay ③ 3.5", 1" high, no access, std disk * supports reader/diskette/2nd disk Slot 1: Low Profile, PCI Express 2.0 x1 Slot 2: Low Profile, PCI Express 2.0 x16 (35w max) Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3
Implementation	Memory		
Memory	<b>2GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; three sockets available		
Graphics	<b>ATI™ Radeon™ 3100</b> , integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter		
SATA disk	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support		
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar		
eSATA port	None		
EIDE controller	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)		
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	One internal speaker for business audio		
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0		
Modem	None		
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo		
Power supply	220 watts with variable speed fan, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-6400 DDR2 UDIMM	41U2977	
	2GB PC2-6400 DDR2 UDIMM	41U2978	
	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	
	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	
	More accessories on O-A62 sheet		
<b>Preloaded applications<sup>5</sup></b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Education software			
- VitalSource™ Library School Edition			
- Adobe® Elements			
- Photoshop Elements 6			
- Premiere Elements 4			
• Rescue and Recovery™			
• Client Security Solution™			
• ThinkVantage Productivity Center			
• ThinkVantage System Update			
• McAfee® VirusScan® Plus (30 days of virus definitions)			
• Lenovo System Toolbox			
• Adobe Reader®			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
• Corel® WinDVD® (DVD±RW)			
	Supports ThinkVantage® technologies		
	GREENGUARD® certified RoHS-compliant		
	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ 3-year parts and labor</li> <li>↔ International Warranty Service<sup>9</sup></li> <li>↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↔ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↔ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↔ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
 US models announced July 7, 2009  
 US models withdrawn effective March 2010

# ThinkCentre® A62 Desktop (9486) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	Vista preload	Global Educ	Avail date
<b>A62</b>	9486-E6U	4x3	Sempron LE-1300	2.3	Single	1GB	160GB <sup>2</sup>	DVD±RW	3100	VGA, DVI-D	Business32	Educ	Sep 08
<b>A62</b>	9486-A4U	4x3	Athlon 1640B	2.7	Single	1GB	160GB	DVD	3100	VGA, DVI-D	Business32		Sep 08
<b>A62</b>	9486-H9U	4x3	Athlon X2 4450B	2.3	Dual	1GB	160GB	DVD±RW	3100	VGA, DVI-D	Business32	Educ	Sep 08
<b>A62</b>	9486-H8U	4x3	Athlon X2 4450B	2.3	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	Business32		Sep 08
<b>A62</b>	9486-H7U	4x3	Athlon X2 4450B	2.3	Dual	1GB	160GB	DVD	3100	VGA, DVI-D	Business32		Sep 08
<b>A62</b>	9486-H6U	4x3	Athlon X2 4450B	2.3	Dual	1GB	160GB	DVD±RW	<b>9300GE</b>	DVI-I	Business32		Sep 08
<b>A62</b>	9486-A3U	4x3	Athlon X2 5000B	2.6	Dual	1GB	160GB	DVD±RW	3100	VGA, DVI-D	Business32		Sep 08
<b>A62</b>	9486-A1U	4x3	Athlon X2 5400B	2.8	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	Business32		Sep 08
<b>A62</b>	9486-A2U	4x3	Phenom X3 8600B	2.3	Triple	2GB	160GB	DVD±RW	3100	VGA, DVI-D	Business64		Sep 08

• **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><b>Stability and manageability for large enterprise and mid-market</b></p> <p><b>AMD® Sempron™ Processor LE-1300</b> with single-core, integrated DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 4450B, 5000B, or 5400B</b> with <b>dual-core</b>, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with <b>triple-core</b>, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+</p>	<p><b>Desktop</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, access, open*                      Bay ③ 3.5", 1" high, no access, std disk</p> <p>* supports reader/diskette/2nd disk</p> <p>Slot 1: Low Profile, PCI Express 2.0 x1                      Slot 2: Low Profile, PCI Express 2.0 x16 (35w max)**                      Slot 3: Low Profile, 32-bit PCI 2.3                      Slot 4: Low Profile, 32-bit PCI 2.3</p> <p>** used in some models</p>
Implementation		
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, four 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available;                      H8U/H9U: <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel;                      Others: <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel</p>	
Graphics	<p><i>Some:</i> <b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI graphics adapter</p> <p><i>Some:</i> <b>NVIDIA® GeForce® 9300 GE</b>, PCI Express® x16 adapter, 256MB, one DVI-I connector (includes DVI-to-VGA dongle), S-Video out for TV-out, HDCP, DirectX 10, 30 watts</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	Supports ThinkVantage® technologies
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), H6U: monitor (DVI-I), S-Video out; Others: monitor (VGA DB-15, DVI-D)	GREENGUARD® certified RoHS-compliant
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	220 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® Vista® Business 32	1GB PC2-5300 CL5 DDR2 UDIMM	73P4984
- <i>Some:</i> Genuine Windows Vista Business 64	2GB PC2-5300 CL5 DDR2 UDIMM	73P4985
◇ Vista Premium logo	1GB PC2-6400 DDR2 UDIMM	41U2977
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	2GB PC2-6400 DDR2 UDIMM	41U2978
• <i>Some:</i> Education software	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618
- VitalSource™ Library School Edition	Super Multi-Burner DL DVD±RW SATA Drive	41N5620
- Adobe® Elements	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
- Photoshop Elements 6	More accessories on O-A62 sheet	
- Premiere Elements 4	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Rescue and Recovery™	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	

See footnotes for important warranty information  
 US models announced August 12 or September 9, 2008  
 US models withdrawn effective July 2009 or March 2010

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 (ATHN1-1) March 2010



# ThinkCentre® A62 Desktop (7057) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	SATA optical	Integrated graphics	Monitor connectors	ENERGY STAR 5.0	Preload	Global Educ	Avail date
A62	7057-B5U	4x3	Athlon X2 5000B	2.6	Dual	1GB	160GB <sup>2</sup>	DVD	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	7057-B6U	4x3	Athlon X2 5000B	2.6	Dual	2GB	160GB	DVD±RW	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	7057-B7U	4x3	Athlon X2 5400B	2.8	Dual	2GB	250GB	DVD±RW	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	7057-B8U	4x3	Phenom X3 8450	2.1	Triple	1GB	160GB	DVD	3100	VGA, DVI-D	None	XP Pro	None	Dec 08
A62	7057-A3U	4x3	Athlon 1640B	2.7	Single	1GB	160GB	DVD	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	7057-BBU	4x3	Athlon X2 4450B	2.3	Dual	1GB	160GB	DVD	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	7057-A2U	4x3	Athlon X2 5000B	2.6	Dual	1GB	160GB	DVD±RW	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	7057-A1U	4x3	Phenom X3 8600B	2.3	Triple	2GB	160GB	DVD±RW	3100	VGA, DVI-D	None	Bus64	None	Dec 08

• These models have a 3-year limited warranty<sup>1</sup>

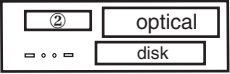
Positioning Processor	<b>Stability and manageability for large enterprise and mid-market AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 4450B, 5000B, or 5400B</b> with <b>dual-core</b> , virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8450 or 8600B</b> with <b>triple-core</b> , virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+		<b>Desktop</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																										
Implementation	<b>1GB or 2GB std.</b> , 8GB max <sup>8</sup> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available; <i>Others:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel capable; <i>Axx:</i> <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable		Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, access, open* Bay ③ 3.5", 1" high, no access, std disk * supports reader/diskette/2nd disk																										
Memory	<b>ATI™ Radeon™ 3100</b> , integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter		Slot 1: Low Profile, PCI Express 2.0 x1 Slot 2: Low Profile, PCI Express 2.0 x16 (35w max) Slot 3: Low Profile, 32-bit PCI 2.3 Slot 4: Low Profile, 32-bit PCI 2.3																										
Graphics	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support SATA DVD <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive SATA DVD±RW <i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors on planar eSATA port None EIDE controller None Diskette drive None Media reader None		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																										
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant																										
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> </ul> ↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↔ <b>Post warranty maintenance services available</b> ↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b>																										
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)																												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																												
Speaker	One internal speaker for business audio																												
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0																												
Modem	None																												
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																												
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo																												
Power supply	220 watts with variable speed fan, autosensing, 80% PSU																												
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b> <table border="0"> <tr> <td>- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</td> <td>1GB PC2-5300 CL5 DDR2 UDIMM</td> <td>73P4984</td> </tr> <tr> <td>- <i>Some:</i> Genuine Windows Vista Business 32</td> <td>2GB PC2-5300 CL5 DDR2 UDIMM</td> <td>73P4985</td> </tr> <tr> <td>- <i>Some:</i> Genuine Windows Vista Business 64</td> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>◇ <i>Vista models:</i> Vista Premium logo</td> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>DVD-ROM DL SATA 1.5Gb/s 16-48X Max</td> <td>41N5618</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> <tr> <td></td> <td>More accessories on O-A62 sheet</td> <td></td> </tr> </table>		- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-5300 CL5 DDR2 UDIMM	73P4984	- <i>Some:</i> Genuine Windows Vista Business 32	2GB PC2-5300 CL5 DDR2 UDIMM	73P4985	- <i>Some:</i> Genuine Windows Vista Business 64	1GB PC2-6400 DDR2 UDIMM	41U2977	◇ <i>Vista models:</i> Vista Premium logo	2GB PC2-6400 DDR2 UDIMM	41U2978		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		ATI Radeon HD 3470 256MB (DP, VGA)	45K1636		More accessories on O-A62 sheet	
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-5300 CL5 DDR2 UDIMM	73P4984																											
- <i>Some:</i> Genuine Windows Vista Business 32	2GB PC2-5300 CL5 DDR2 UDIMM	73P4985																											
- <i>Some:</i> Genuine Windows Vista Business 64	1GB PC2-6400 DDR2 UDIMM	41U2977																											
◇ <i>Vista models:</i> Vista Premium logo	2GB PC2-6400 DDR2 UDIMM	41U2978																											
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	DVD-ROM DL SATA 1.5Gb/s 16-48X Max	41N5618																											
	Super Multi-Burner DL DVD±RW SATA Drive	41N5620																											
	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636																											
	More accessories on O-A62 sheet																												
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="#">lenovo.com/accessoriesguide</a> Other accessories at <a href="#">lenovo.com/accessories</a>																												
	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• McAfee® VirusScan® Plus (30-day)</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>																												

See footnotes for important warranty information  
 US models announced August 12, September 9, or December 9, 2008  
 US models withdrawn effective July, August, or November 2009 or March 2010

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 (ATHN1-2) March 2010

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>6</sup>	SATA disk	SATA optical	Integrated graphics	Monitor connectors	Vista preload	Global (G) GMP (P)	Avail date
A62	7062-A1U	4x3	Athlon X2 5400B	2.8	Dual	2GB	160GB <sup>2</sup>	DVD±RW	3100	VGA, DVI-D	Business32	G P	Sep 08

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<p><i>Stability and manageability for large enterprise and mid-market</i>  <b>AMD® Athlon™ X2 Dual-Core Processor 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache</p>		<p><b>Desktop</b></p>  <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 3.5", 1" high, access, open*                      Bay ③ 3.5", 1" high, no access, std disk</p> <p>* supports reader/diskette/2nd disk</p> <p>Slot 1: Low Profile, PCI Express 2.0 x1                      Slot 2: Low Profile, PCI Express 2.0 x16 (35w max)                      Slot 3: Low Profile, 32-bit PCI 2.3                      Slot 4: Low Profile, 32-bit PCI 2.3</p>													
Implementation	<p>Processor in Socket AM2</p>															
Memory	<p><b>2GB std, 8GB max<sup>6</sup>, PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available</p>															
Graphics	<p><b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</p>															
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>															
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support</p>															
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>															
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors</p>															
eSATA port	<p>None</p>															
EIDE controller	<p>None</p>															
Diskette drive	<p>None</p>															
Media reader	<p>None</p>															
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>															
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>															
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)</p>															
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>															
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>															
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>															
Speaker	<p>One internal speaker for business audio</p>															
Ethernet	<p>Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0</p>															
Modem	<p>None</p>															
Security chip	<p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>															
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>															
Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>															
Power supply	<p>220 watts with variable speed fan, manual switch</p>															
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® Vista® Business 32                      ✦ Vista Premium logo</p>															
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>															
<b>Accessories</b>	<table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB (2-DVI)</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> </table> <p>More accessories on O-A62 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ATI Radeon HD 2400 XT 256MB (2-DVI)	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636
1GB PC2-6400 DDR2 UDIMM	41U2977															
2GB PC2-6400 DDR2 UDIMM	41U2978															
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015															
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990															
Super Multi-Burner DL DVD±RW SATA Drive	41N5620															
ATI Radeon HD 2400 XT 256MB (2-DVI)	43R1962															
ATI Radeon HD 3470 256MB (DP, VGA)	45K1636															
<p>Supports ThinkVantage® technologies</p>																
<p>GREENGUARD® certified                      RoHS-compliant</p>																
<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇨ 3-year parts and labor</li> <li>⇨ International Warranty Service<sup>9</sup></li> <li>⇨ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>⇨ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>⇨ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>⇨ Post warranty maintenance services available</li> <li>⇨ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>																

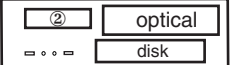
See footnotes for important warranty information  
 US model announced August 12, 2008  
 US model withdrawn effective December 2009

# ThinkCentre® A62 Desktop (3658) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Integrated graphics	Monitor connectors	ENERGY STAR 5.0	Vista preload	Global (G) GMP (P)	Avail date
<b>A62</b>	3658-AAU	4x3	Athlon X2 5400B	2.8	Dual	2GB	160GB <sup>2</sup>	DVD±RW	3100	VGA, DVI-D	None	Bus32	G P	Jan 09

- **This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty**

Positioning Processor	<b>Stability and manageability for large enterprise and mid-market AMD® Athlon™ X2 Dual-Core Processor 5400B with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache</b>		<b>Desktop</b>	
Implementation	Processor in Socket AM2		 <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 13.0" W X 16.2" D X 4.1" H</li> <li>• 331mm W X 412mm D X 104mm H</li> <li>• 19.4lb (8.8kg) in typical configuration</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Memory	<b>2GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available</b>		<ul style="list-style-type: none"> <li>• Bay ① 5.25", 1.6" high, access, std optical</li> <li>• Bay ② 3.5", 1" high, access, open*</li> <li>• Bay ③ 3.5", 1" high, no access, std disk</li> </ul>	
Graphics	<b>ATI™ Radeon™ 3100, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</b>		<ul style="list-style-type: none"> <li>• * supports reader/diskette/2nd disk</li> </ul>	
SATA disk	<b>160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</b>		<ul style="list-style-type: none"> <li>• Slot 1: Low Profile, PCI Express 2.0 x1</li> <li>• Slot 2: Low Profile, PCI Express 2.0 x16 (35w max)</li> <li>• Slot 3: Low Profile, 32-bit PCI 2.3</li> <li>• Slot 4: Low Profile, 32-bit PCI 2.3</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support			
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors			
eSATA port	None			
EIDE controller	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>AMD 780V Chipset with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</b>		<p align="center"><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0			
Modem	None			
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo			
Power supply	220 watts with variable speed fan, autosensing, 80% PSU			
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>			
- Genuine Windows® Vista® Business 32	1GB PC2-6400 DDR2 UDIMM	41U2977	Supports ThinkVantage® technologies	
◇ Vista Premium logo	2GB PC2-6400 DDR2 UDIMM	41U2978	GREENGUARD® certified	
<b>Preloaded applications<sup>5</sup></b>	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	RoHS-compliant	
• Rescue and Recovery™	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		
• Client Security Solution™	Super Multi-Burner DL DVD±RW SATA Drive	41N5620		
• ThinkVantage Productivity Center	ATI Radeon HD 2400 XT 256MB (2-DVI)	43R1962		
• ThinkVantage System Update	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636		
• ThinkVantage Power Manager	More accessories on O-A62 sheet			
• McAfee® VirusScan® Plus (30 days of virus definitions)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>			
• Lenovo System Toolbox	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>			
• Adobe® Reader®				
• Microsoft® Office 2007 Trial (60-day)				
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD±RW)				
			<p align="center"><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>⇒ <b>3-year parts and labor</b></li> <li>⇒ <b>International Warranty Service<sup>9</sup></b></li> <li>⇒ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>⇒ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus™ part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>⇒ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>⇒ <b>Post warranty maintenance services available</b></li> <li>⇒ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>	

See footnotes for important warranty information  
 US model announced December 9, 2008  
 US model withdrawn effective December 2009

# ThinkCentre® A62 Tower (9705) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	Vista preload	Global Educ	Avail date
A62	9705-B5U	4x4	Athlon 1640B	2.7	Single	1GB	160GB <sup>b</sup>	None	DVD±RW	3100	VGA, DVI-D	Home Basic	None	Dec 08
A62	9705-B6U	4x4	Athlon X2 4450B	2.3	Dual	2GB	160GB	None	DVD±RW	3100	VGA, DVI-D	Home Basic	None	Dec 08
A62	9705-B7U	4x4	Athlon X2 5000B	2.6	Dual	2GB	320GB	None	DVD±RW	3100	VGA, DVI-D	Home Premium	None	Dec 08

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>

Positioning Processor	Quality, reliability, and manageability for small/medium businesses		<b>Tower</b>		
Implementation	AMD® Athlon™ Processor 1640B with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or AMD Athlon X2 Dual-Core Processor 4450B or 5000B with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache Processor in Socket AM2		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Memory	1GB or 2GB std, 8GB max <sup>8</sup> , PC2-6400 800MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk  Slot 1: half-length, full-height, PCIe 2.0 x1 Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	ATI™ Radeon™ 3100, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter				
SATA disk	160GB or 320GB, SATA 3.0Gb/s 7200 rpm, vibration dampening				
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support				
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive				
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar				
eSATA port	None				
EIDE controller	None				
Diskette drive	None				
Media reader	None				
Chipset	AMD 780V Chipset with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O				
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)				
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)				
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)				
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)				
Audio	High Definition (HD) Audio, Realtek® ALC662 codec				
Speaker	One internal speaker for business audio				
Ethernet	Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0				
Modem	None				
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo		Supports ThinkVantage® technologies		
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo		GREENGUARD® certified		
Power supply	280 watts with variable speed fan, manual switch		RoHS-compliant		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		<b>Limited Warranty<sup>1</sup></b>		
- Some: Microsoft® Windows® Vista® Home Basic Edition (32-bit)	1GB PC2-6400 NP DDR2 UDIMM 41U2977		↔ 1-year parts and labor		
- Some: Microsoft Windows Vista Home Premium Edition (32-bit)	2GB PC2-6400 NP DDR2 UDIMM 41U2978		↔ International Warranty Service <sup>9</sup>		
↔ Vista Basic logo	250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015		↔ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)		
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990		↔ Onsite service upgrade options (in eligible locations): <sup>7</sup>		
• Rescue and Recovery™	USB Portable Diskette Drive 05K9276		• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)		
• Client Security Solution™	USB 2.0 Lenovo Multimedia Headset 40Y8518		• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)		
• ThinkVantage Productivity Center	USB 2.0 Lenovo Webcam 40Y8519		• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)		
• Norton Internet Security™ (90 days of virus definitions)	USB 2.0 Essential Memory Key 32GB 45K1258		• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)		
• Diskkeeper® Home	USB 2.0 Ultra Secure Memory Key 4GB 45J5917		• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)		
• PC-Doctor™ (diagnostics)	USB 2.0 Ultra Secure Memory Key 8GB 45J5918		↔ ThinkPlus services at lenovo.com/thinkplus/warranty		
• Adobe® Reader	USB 2.0 Portable 160GB Hard Disk 43R1784		↔ Post warranty maintenance services available		
• Windows Live™ Toolbar	USB 2.0 Portable Secure 320GB Hard Disk 43R2019		↔ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378		
• Windows Live Search	Super Multi-Burner DL DVD±RW SATA Drive 41N5620				
• Picasa from Google	ThinkVision® L1700p 17" Monitor 9417HE2				
• Microsoft Office 2007 Trial (60-day)	ThinkVision L1940p Wide 19" Monitor 4424HB6				
• EarthLink Trial	ThinkVision L2240p Wide 22" Monitor 4422HB6				
• Sonic RecordNow and Drive Letter Access (DVD±RW)	ThinkVision L2440p Wide 24" Monitor 4420HB2				
• Corel® WinDVD® (DVD±RW)	Wireless Kbd & Opt Wheel Mouse (via USB) 73P4067				
	Laser Tilt Wheel Mouse (USB, PS/2) 41U3074				
	Kensington Cable Lock from Lenovo 73P2582				
	ATI Radeon HD 2400 XT 256MB 43R1962				
	ATI Radeon HD 3470 256MB (DP, VGA) 45K1636				
	NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635				
	Acc Guide in pdf lenovo.com/accessoriesguide				
	Other accessories at lenovo.com/accessories				

See footnotes for important warranty information  
 US models announced November 25, 2008  
 US models withdrawn effective April 2009

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 (ATHN1-10) April 2009

**ThinkCentre® A62 Tower (9705) - TopSeller (December 2008) - withdrawn** *Personal Systems Reference (PSREF)*

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Monitor connectors	Vista preload	Global Educ	Avail date
<b>A62</b>	9705-B8U	4x4	Phenom X3 8450	2.1	Triple	3 x 1GB	320GB <sup>2</sup>	DVD±RW	3100, <b>3470</b>	VGA, DVI-D, VGA, DP	Home Prem	No	Jan 09

- **This small and medium business (SMB) model is part of the US TopSeller™ Program**
- **This model has a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<i>Quality, reliability, and manageability for small/medium businesses</i>		<b>Tower</b>																																																			
Implementation	<b>AMD® Phenom™ X3 Triple-Core Processor 8450</b> with <b>triple-core</b> , virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2+		<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																																																			
Memory	<b>3GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b> , non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in three sockets; one socket available		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk																																																			
Graphics	<b>ATI™ Radeon™ 3100</b> , integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with standard dual-head ATI graphics adapter <b>ATI Radeon HD 3470</b> , PCI Express® 2.0 x16 adapter, 256MB, one analog VGA DB-15 connector, one DisplayPort™ connector, HDCP, DirectX 10.1, ATI Avivo, SurroundView, 25 watts		Slot 1: half-length, full-height, PCIe 2.0 x1 Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)* Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3 * graphics adapter in slot																																																			
SATA disk	<b>320GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts SATA controller Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support SATA DVD±RW Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive SATA cables Two SATA cables (each 1-drop to device), four SATA connectors eSATA port None EIDE controller None Diskette drive None Media reader None		<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																																																			
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O		Supports ThinkVantage® technologies																																																			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		GREENGUARD® certified RoHS-compliant																																																			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D, VGA DB-15, DP)		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↔ <b>1-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																																																			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																																																					
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																																																					
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																																																					
Speaker	One internal speaker for business audio																																																					
Ethernet	Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0																																																					
Modem	None																																																					
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																																																					
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																																																					
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo																																																					
Power supply	280 watts with variable speed fan, manual switch																																																					
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Microsoft® Windows® Vista® Home Premium Edition (32-bit)</li> <li>↳ Vista Premium logo</li> </ul>		<b>Accessories</b> <table border="0"> <tr><td>1GB PC2-6400 NP DDR2 UDIMM</td><td>41U2977</td></tr> <tr><td>2GB PC2-6400 NP DDR2 UDIMM</td><td>41U2978</td></tr> <tr><td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>41N3015</td></tr> <tr><td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td><td>43R1990</td></tr> <tr><td>USB Portable Diskette Drive</td><td>05K9276</td></tr> <tr><td>USB 2.0 Lenovo Multimedia Headset</td><td>40Y8518</td></tr> <tr><td>USB 2.0 Lenovo Webcam</td><td>40Y8519</td></tr> <tr><td>USB 2.0 Essential Memory Key 32GB</td><td>45K1258</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 2GB</td><td>45J5916</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 4GB</td><td>45J5917</td></tr> <tr><td>USB 2.0 Ultra Secure Memory Key 8GB</td><td>45J5918</td></tr> <tr><td>USB 2.0 Portable 160GB Hard Disk</td><td>43R1784</td></tr> <tr><td>USB 2.0 Portable Secure 320GB Hard Disk</td><td>43R2019</td></tr> <tr><td>Super Multi-Burner DL DVD±RW SATA Drive</td><td>41N5620</td></tr> <tr><td>ThinkVision® L1700p 17" Monitor</td><td>9417HE2</td></tr> <tr><td>ThinkVision L1940p Wide 19" Monitor</td><td>4424HB6</td></tr> <tr><td>ThinkVision L2240p Wide 22" Monitor</td><td>4422HB6</td></tr> <tr><td>ThinkVision L2440p Wide 24" Monitor</td><td>4420HB2</td></tr> <tr><td>ThinkVision L2440x Wide 24" Monitor</td><td>4421HB2</td></tr> <tr><td>Wireless Kbd &amp; Opt Wheel Mouse (via USB)</td><td>73P4067</td></tr> <tr><td>Laser Tilt Wheel Mouse (USB, PS/2)</td><td>41U3074</td></tr> <tr><td>Kensington Cable Lock from Lenovo</td><td>73P2582</td></tr> <tr><td>ATI Radeon HD 2400 XT 256MB</td><td>43R1962</td></tr> <tr><td>ATI Radeon HD 3470 256MB (DP, VGA)</td><td>45K1636</td></tr> <tr><td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td><td>45K1635</td></tr> </table> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		1GB PC2-6400 NP DDR2 UDIMM	41U2977	2GB PC2-6400 NP DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	USB Portable Diskette Drive	05K9276	USB 2.0 Lenovo Multimedia Headset	40Y8518	USB 2.0 Lenovo Webcam	40Y8519	USB 2.0 Essential Memory Key 32GB	45K1258	USB 2.0 Ultra Secure Memory Key 2GB	45J5916	USB 2.0 Ultra Secure Memory Key 4GB	45J5917	USB 2.0 Ultra Secure Memory Key 8GB	45J5918	USB 2.0 Portable 160GB Hard Disk	43R1784	USB 2.0 Portable Secure 320GB Hard Disk	43R2019	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ThinkVision® L1700p 17" Monitor	9417HE2	ThinkVision L1940p Wide 19" Monitor	4424HB6	ThinkVision L2240p Wide 22" Monitor	4422HB6	ThinkVision L2440p Wide 24" Monitor	4420HB2	ThinkVision L2440x Wide 24" Monitor	4421HB2	Wireless Kbd & Opt Wheel Mouse (via USB)	73P4067	Laser Tilt Wheel Mouse (USB, PS/2)	41U3074	Kensington Cable Lock from Lenovo	73P2582	ATI Radeon HD 2400 XT 256MB	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635
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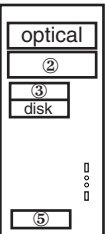
See footnotes for important warranty information  
 US model announced December 16, 2008  
 US model withdrawn effective April 2009

# ThinkCentre® A62 Tower (9935) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	Preload	Global Educ	Avail date
<b>A62</b>	9935-D1U	4x5	Sempron LE-1300	2.3	Single	1GB	160GB <sup>2</sup>	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09
<b>A62</b>	9935-B1U	4x4	Athlon 1640B	2.7	Single	1GB	160GB		DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B6U	4x4	Athlon X2 4450B	2.3	Dual	1GB	160GB		DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B7U	4x4	Athlon X2 4450B	2.3	Dual	2GB	160GB		DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B2U	4x4	Athlon X2 5000B	2.6	Dual	1GB	160GB		DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B3U	4x4	Athlon X2 5000B	2.6	Dual	2GB	160GB		DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B4U	4x4	Phenom X3 8450	2.1	Triple	1GB	160GB		DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-B5U	4x4	Phenom X3 8450	2.1	Triple	2GB	320GB		DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
<b>A62</b>	9935-D2U	4x5	Phenom X3 8600B	2.3	Triple	4GB	500GB	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09

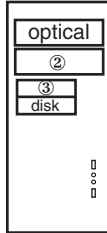
• **These small and medium business (SMB) models are part of the US TopSeller™ Program**  
 • **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	Quality, reliability, and manageability for small/medium businesses <b>AMD® Sempron™ Processor LE-1300</b> with single-core, integrated DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 4450B</b> or <b>5000B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8450</b> or <b>8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+	<b>Tower</b>	<ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2lb (11.0kg) in typical configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul>	
Implementation		Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk* * 2nd Disk Bay is only available on some models		
Memory	<b>1GB, 2GB, or 4GB std</b> , 8GB max <sup>8</sup> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available; <i>D1U/D2U:</i> <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel; <i>Others:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel			
Graphics	<b>ATI™ Radeon™ 3100</b> , integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter	Slot 1: half-length,full-height, PCIe 2.0 x1 Slot 2: half-length,full-height, PCIe 2.0 x16 (75w max) Slot 3: half-length,full-height, 32-bit PCI 2.3 Slot 4: half-length,full-height, 32-bit PCI 2.3		
SATA disk	<b>160GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts			
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support			
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive			
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive			
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar			
eSATA port	None			
EIDE controller	None			
Diskette drive	None			
Media reader	None			
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O			
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)			
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)			
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)			
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)			
Audio	High Definition (HD) Audio, Realtek® ALC662 codec			
Speaker	One internal speaker for business audio			
Ethernet	Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0			
Modem	None			
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant			
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo			
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo			
Power supply	280 watts with variable speed fan, manual switch			
<b>Preloaded operating system<sup>20</sup></b>	- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	<b>Accessories</b>	1GB PC2-5300 CL5 DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 DDR2 UDIMM 73P4985 1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ThinkVision® L2440p Wide 24" Monitor 4420HB2 ATI Radeon HD 2400 XT 256MB (2-DVI) 43R1962 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® GeForce® 9500GT 512MB (DP, DVI)45K1635 More accessories on O-A62 sheet Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>Rescue and Recovery™</li> <li>Client Security Solution™</li> <li>ThinkVantage Productivity Center</li> <li>ThinkVantage System Update</li> <li>McAfee® VirusScan® Plus (30-day)</li> <li>Lenovo System Toolbox</li> <li>Adobe® Reader®</li> <li>Microsoft® Office 2007 Trial (60-day)</li> <li>Roxio® Creator® Business Edition (DVD±RW)</li> <li>Roxio MyDVD® (DVD±RW)</li> <li>Corel® WinDVD® (DVD, DVD±RW)</li> </ul>			
			<b>Security</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>Individual USB port disablement</li> </ul>	
			Supports ThinkVantage® technologies	
			GREENGUARD® certified RoHS-compliant	
			<b>Limited Warranty<sup>1</sup></b>	
			<ul style="list-style-type: none"> <li>3-year parts and labor</li> <li>International Warranty Service®</li> <li>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></li> </ul>	

See footnotes for important warranty information  
 US models announced September 9, 2008 or June 2, 2009  
 US models withdrawn effective April, August, or November 2009 or January 2010

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	Preload	Global Educ	Avail date
A62	9935-D3U	4x4	Athlon 1640B	2.7	Single	1GB	160GB <sup>2</sup>	None	DVD	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9935-D4U	4x4	Athlon X2 5000B	2.6	Dual	1GB	250GB	None	DVD	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9935-D5U	4x4	Athlon X2 5400B	2.8	Dual	1GB	160GB	None	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9935-B8U	4x4	Athlon X2 5400B	2.8	Dual	2GB	250GB	None	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Apr 09
A62	9935-D6U	4x4	Phenom X3 8600B	2.3	Triple	2GB	250GB	None	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jul 09
A62	9935-B9U	4x4	Phenom X4 9600B	2.3	Quad	2GB	320GB	None	DVD±RW	3100	VGA, DVI-D	Bus32	None	Apr 09

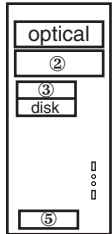
**• These small and medium business (SMB) models are part of the US TopSeller™ Program**  
**• These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Quality, reliability, and manageability for small/medium businesses</i></p> <p><b>AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 5000B</b> or <b>5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache or <b>AMD Phenom X4 Quad-Core Processor 9600B</b> with quad-core, virtualization technology, integrated DDR2 memory controller, 2MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation		<p>Bay ① 5.25", 1.6" high, access, std optical</p> <p>Bay ② 5.25", 1.6" high, access, open</p> <p>Bay ③ 3.5", 1" high, access, open (reader/diskette)</p> <p>Bay ④ 3.5", 1" high, no access, std disk</p>
Memory	<p><b>1GB or 2GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets; Non-italics: standard memory in one socket; three sockets available</b></p>	<p>Slot 1: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 3: half-length, full-height, 32-bit PCI 2.3</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>
Graphics	<p><b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>GREENGUARD® certified RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↔ <b>3-year parts and labor</b></li> <li>↔ <b>International Warranty Service<sup>9</sup></b></li> <li>↔ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↔ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↔ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↔ <b>Post warranty maintenance services available</b></li> <li>↔ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
SATA disk	<p><b>160GB, 250GB, or 320GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support	
SATA DVD	Some: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	
SATA DVD±RW	Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<ul style="list-style-type: none"> <li>- Some: Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</li> <li>- Some: Genuine Windows Vista Business 32</li> <li>↔ <i>Vista models: Vista Premium logo</i></li> </ul>	<p><b>Accessories</b></p> <ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ATI Radeon HD 2400 XT 256MB (2-DVI) 43R1962</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>More accessories on O-A62 sheet</li> </ul> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>
<b>Preloaded applications<sup>5</sup> (all OSes)</b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager (Vista)</li> <li>• McAfee® VirusScan® Plus (30-day)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>	

See footnotes for important warranty information  
 US models announced April 7 or July 7, 2009  
 US models withdrawn effective April 2009, August 2009, or January 2010

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor connectors	Preload	Global Educ	Avail date
A62	9485-E4U	4x5	Athlon 1640B	2.7	Single	1GB	160GB <sup>2</sup>	Bay	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-E5U	4x5	Athlon X2 5000B	2.6	Dual	1GB	160GB	Bay	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-E6U	4x5	Athlon X2 5000B	2.6	Dual	1GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-E7U	4x5	Athlon X2 5000B	2.6	Dual	2GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-E8U	4x4	Athlon X2 5400B	2.8	Dual	1GB	250GB	Bay	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-E9U	4x5	Athlon X2 5400B	2.8	Dual	2GB	250GB	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-F1U	4x5	Phenom X3 8450	2.1	Triple	1GB	160GB	Bay	DVD	3100	VGA, DVI-D	XP Pro	None	Sep 08
A62	9485-F2U	4x5	Phenom X3 8450	2.1	Triple	2GB	160GB	Bay	DVD±RW	<b>9300GE</b>	VGA, DVI-I	XP Pro	None	Sep 08
A62	9485-H8U	4x5	Phenom X3 8600B	2.3	Triple	2GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	XP Pro	None	Jun 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<i>Stability and manageability for large enterprise and mid-market</i> <b>AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 5000B</b> or <b>5400B</b> with <b>dual-core</b> , virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8450</b> or <b>8600B</b> with <b>triple-core</b> , virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color</li> <li>6.9" W X 17.3" D X 15.8" H</li> <li>175mm W X 440mm D X 402mm H</li> <li>24.2lb (11.0kg) in typical configuration</li> <li>Handle on top front</li> <li>Toolless cover removal</li> <li>Toolless disk, diskette drive, optical drive removal</li> <li>Toolless adapter retention</li> </ul> 
Implementation		
Memory	<b>1GB or 2GB std.</b> , 8GB max <sup>8</sup> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available; <i>H8U:</i> <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel; <i>Others:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader/diskette) Bay ④ 3.5", 1" high, no access, std disk Bay ⑤ 3.5", 1" high, no access, opt disk*
Graphics	<i>Some:</i> <b>ATI™ Radeon™ 3100</b> , int graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D conn, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI graphics adapter <i>Some:</i> <b>NVIDIA® GeForce® 9300 GE</b> , PCI Express® x16 adapter, 256MB, one analog VGA DB-15 conn via cable, one DVI-I conn, S-Video out for TV-out, HDCP, DirectX 10, 30 watts	* 2nd Disk Bay is only available on some models Slot 1: half-length, full-height, PCIe 2.0 x1 Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)** Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3 ** used in some models
SATA disk	<b>160GB or 250GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts	<b>Security</b> <ul style="list-style-type: none"> <li>Security chip (see information on left)</li> <li>One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>Padlock loop (in rear for opt padlock)</li> <li>Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Administrator password</li> <li>Hard disk password</li> <li>Boot sequence control</li> <li>Boot without keyboard, mouse, diskette</li> <li>Serial port I/O control</li> <li>Parallel port I/O control</li> <li>Individual USB port disablement</li> </ul> Supports ThinkVantage® technologies
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support	
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	GREENGUARD® certified RoHS-compliant
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar	<b>Limited Warranty<sup>1</sup></b> ↪ <b>3-year parts and labor</b> ↪ <b>International Warranty Service<sup>9</sup></b> ↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b> ↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li><b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li><b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li><b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li><b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li><b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> ↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b> ↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup></b>
eSATA port	None	
EIDE controller	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>F2U:</i> monitor (VGA DB-15, DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15, DVI-D)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	One internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0	
Modem	None	
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	1GB PC2-5300 CL5 DDR2 UDIMM 73P4984 2GB PC2-5300 CL5 DDR2 UDIMM 73P4985 1GB PC2-6400 DDR2 UDIMM 41U2977 2GB PC2-6400 DDR2 UDIMM 41U2978 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 ATI Radeon HD 3470 256MB (DP, VGA) 45K1636 NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635 More accessories on O-A62 sheet	
<b>Preloaded applications<sup>5</sup></b> (only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessorie">lenovo.com/accessorie</a>	
• Rescue and Recovery™		
• Client Security Solution™		
• ThinkVantage Productivity Center		
• McAfee® VirusScan® Plus (30-day)		
• Adobe® Reader®		
• Microsoft® Office 2007 Trial (60-day)		
• Roxio® Creator® Business Edition (DVD±RW)		
• Roxio MyDVD® (DVD±RW)		
• Corel® WinDVD® (DVD, DVD±RW)		

See footnotes for important warranty information

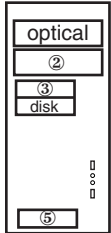
US model announced September 9, 2008 or June 2, 2009

US models withdrawn effective July, August, or November 2009 or March 2010



Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor connectors	Preload	Global Educ	Avail date
A62	9485-J1U	4x4	Athlon X2 5400B	2.8	Dual	2GB	250GB <sup>2</sup>		DVD±RW	3100	VGA, DVI-D	XP Pro	Educ	Jul 09
A62	9485-H7U	4x5	Phenom X3 8600B	2.3	Triple	1GB	160GB	Bay	DVD	3100	VGA, DVI-D	XP Pro	Educ	Apr 09
A62	9485-H9U	4x4	Phenom X3 8600B	2.3	Triple	2GB	250GB		DVD±RW	3100	VGA, DVI-D	XP Pro	Educ	Jul 09

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Stability and manageability for large enterprise and mid-market</i>  <b>AMD® Athlon™ X2 Dual-Core Processor 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or  <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+</p>				<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																							
Implementation					<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk                  Bay ⑤ 3.5", 1" high, no access, opt disk*</p>																							
Memory	<p><b>1GB</b> or <b>2GB std</b>, 8GB max<sup>8</sup>, <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Non-italics: standard memory in one socket; three sockets available</i></p>				<p>Slot 1: half-length, full-height, PCIe 2.0 x1                  Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																							
Graphics	<p><b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</p>				<p>* 2nd Disk Bay is only available on some models</p>																							
SATA disk	<p><b>160GB</b> or <b>250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening</p>																											
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support</p>																											
SATA DVD	<p><i>Some: DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</i></p>																											
SATA DVD±RW	<p><i>Some: Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</i></p>																											
SATA cables	<p>Two SATA cables (each 1-drop to device), four SATA connectors</p>																											
eSATA port	<p>None</p>																											
EIDE controller	<p>None</p>																											
Diskette drive	<p>None</p>																											
Media reader	<p>None</p>								<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>																			
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>																											
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																											
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)</p>																											
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>																											
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>																											
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>																											
Speaker	<p>One internal speaker for business audio</p>																											
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0</p>																											
Modem	<p>None</p>																											
Security chip	<p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>																											
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																											
Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>								<p>Supports ThinkVantage® technologies</p>																			
Power supply	<p>280 watts with variable speed fan, manual switch</p>																											
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)</p>				<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max</td> <td>41N5618</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ATI Radeon HD 2400 XT 256MB (2-DVI)</td> <td>43R1962</td> </tr> <tr> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> <tr> <td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td> <td>45K1635</td> </tr> </table> <p>More accessories on O-A62 sheet</p>				1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ATI Radeon HD 2400 XT 256MB (2-DVI)	43R1962	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635	<p>GREENGUARD® certified RoHS-compliant</p>	
1GB PC2-6400 DDR2 UDIMM	41U2977																											
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NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635																											
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• <i>Some:</i> Education software</li> <li>• VitalSource™ Library School Edition</li> <li>• Adobe® Elements                             <ul style="list-style-type: none"> <li>- Photoshop Elements 6</li> <li>- Premiere Elements 4</li> </ul> </li> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>				<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>				<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																			

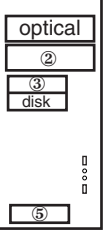
See footnotes for important warranty information  
 US models announced April 7 or July 7, 2009  
 US models withdrawn effective December 2009

# ThinkCentre® A62 Tower (9485) - Vista® - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor connectors	Vista preload	Global Educ	Avail date
A62	9485-A4U	4x5	Athlon 1640B	2.7	Single	1GB	160GB <sup>2</sup>	Bay	DVD	3100	VGA, DVI-D	Bus32		Sep 08
A62	9485-F9U	4x4	Athlon X2 4450B	2.3	Dual	1GB	160GB		DVD	3100	VGA, DVI-D	Bus32		Sep 08
A62	9485-F8U	4x5	Athlon X2 4450B	2.3	Dual	1GB	160GB	Bay	DVD±RW	<b>9300GE</b>	VGA, DVI-I	Bus32		Sep 08
A62	9485-H1U	4x4	Athlon X2 4450B	2.3	Dual	2GB	160GB		DVD±RW	3100	VGA, DVI-D	Bus32	Educ	Sep 08
A62	9485-E2U	4x4	Athlon X2 5000B	2.6	Dual	1GB	160GB		DVD±RW	3100	VGA, DVI-D	Bus32		Sep 08
A62	9485-A1U	4x4	Athlon X2 5400B	2.8	Dual	2GB	160GB		DVD±RW	3100	VGA, DVI-D	Bus32		Sep 08
A62	9485-A2U	4x5	Phenom X3 8600B	2.3	Triple	2GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	Bus64		Sep 08

• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	Stability and manageability for large enterprise and mid-market <b>AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 4450B, 5000B, or 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation		
Memory	<b>1GB</b> or <b>2GB std</b> , 8GB max <sup>8</sup> , four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available; <i>Non-italics:</i> standard memory in one socket; three sockets available; <i>Fxx/H1U:</i> <b>PC2-5300 667MHz DDR2</b> , non-parity, dual-channel; <i>Others:</i> <b>PC2-6400 800MHz DDR2</b> , non-parity, dual-channel	<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> <li>Bay ⑤ 3.5", 1" high, no access, opt disk*</li> </ul>
Graphics	<i>Some:</i> <b>ATI™ Radeon™ 3100</b> , int graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D conn, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI graphics adapter <i>Some:</i> <b>NVIDIA® GeForce® 9300 GE</b> , PCI Express® x16 adapter, 256MB, one analog VGA DB-15 conn via cable, one DVI-I conn, S-Video out for TV-out, HDCP, DirectX 10, 30 watts	<ul style="list-style-type: none"> <li>* 2nd Disk Bay is only available on some models</li> <li>Slot 1: half-length, full-height, PCIe 2.0 x1</li> <li>Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)**</li> <li>Slot 3: half-length, full-height, 32-bit PCI 2.3</li> <li>Slot 4: half-length, full-height, 32-bit PCI 2.3</li> <li>** used in some models</li> </ul>

SATA disk	<b>160GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors on planar
eSATA port	None
EIDE controller	None
Diskette drive	None
Media reader	None
Chipset	<b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), <i>F8U:</i> monitor (VGA DB-15, DVI-I), S-Video out; <i>Others:</i> monitor (VGA DB-15, DVI-D)
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)
Audio	High Definition (HD) Audio, Realtek® ALC662 codec
Speaker	One internal speaker for business audio
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0
Modem	None
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo
Power supply	280 watts with variable speed fan, manual switch

<b>Security</b>
<ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>
Supports ThinkVantage® technologies

GREENGUARD® certified RoHS-compliant
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<b>Limited Warranty<sup>1</sup></b>
<ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>
- <i>Some:</i> Genuine Windows® Vista® Business 32	1GB PC2-5300 CL5 DDR2 UDIMM 73P4984
- <i>Some:</i> Genuine Windows Vista Business 64	2GB PC2-5300 CL5 DDR2 UDIMM 73P4985
↕ Vista Premium logo	1GB PC2-6400 DDR2 UDIMM 41U2977
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	2GB PC2-6400 DDR2 UDIMM 41U2978
• <i>Some:</i> Education software	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990
- VitalSource™ Library School Edition	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618
- Adobe® Elements	Super Multi-Burner DL DVD±RW SATA Drive 41N5620
- Photoshop Elements 6	ATI Radeon HD 3470 256MB (DP, VGA) 45K1636
- Premiere Elements 4	NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635
• Roxio® Creator® Business Edition (DVD±RW)	More accessories on O-A62 sheet
• Roxio MyDVD® (DVD±RW)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>
• Corel® WinDVD® (DVD, DVD±RW)	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>

See footnotes for important warranty information  
 US models announced August 12 or September 9, 2008  
 US models withdrawn effective July 2009, December 2009, or March 2010

# ThinkCentre® A62 Tower (9625) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Monitor connectors	ENERGY STAR 5.0	Preload	Global Educ	Avail date
A62	9625-B5U	4x4	Athlon X2 5000B	2.6	Dual	1GB	160GB <sup>b</sup>		DVD	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	9625-B6U	4x4	Athlon X2 5000B	2.6	Dual	2GB	160GB		DVD±RW	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	9625-B7U	4x4	Athlon X2 5400B	2.8	Dual	2GB	250GB		DVD±RW	3100	VGA, DVI-D	None	XP Pro	None	Sep 08
A62	9625-B9U	4x4	Athlon X2 5400B	2.8	Dual	2GB	160GB		DVD±RW	<b>9300GE</b>	VGA, DVI-I	None	XP Pro	None	Sep 08
A62	9625-B8U	4x4	Phenom X3 8450	2.1	Triple	2GB	160GB		DVD	3100	VGA, DVI-D	None	XP Pro	None	Dec 08
A62	9625-A3U	4x5	Athlon 1640B	2.7	Single	1GB	160GB	Bay	DVD	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	9625-D2U	4x4	Athlon X2 4450B	2.3	Dual	1GB	160GB		DVD±RW	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	9625-A2U	4x5	Athlon X2 5000B	2.6	Dual	1GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	None	Bus32	None	Sep 08
A62	9625-A1U	4x5	Phenom X3 8600B	2.3	Triple	2GB	160GB	Bay	DVD±RW	3100	VGA, DVI-D	None	Bus64	None	Dec 08

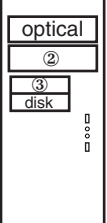
• These models have a 3-year limited warranty<sup>1</sup>

Positioning Processor	<p><i>Stability and manageability for large enterprise and mid-market</i>  <b>AMD® Athlon™ Processor 1640B</b> with single-core, virtualization technology, int DDR2 memory controller, and 512KB L2 cache or <b>AMD Athlon X2 Dual-Core Processor 4450B, 5000B, or 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache or <b>AMD Phenom™ X3 Triple-Core Processor 8450 or 8600B</b> with triple-core, virtualization technology, integrated DDR2 memory controller, 1.5MB dedicated L2 cache and 2MB shared L3 cache Processor in Socket AM2 or AM2+</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>	
Implementation			<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk                  Bay ⑤ 3.5", 1" high, no access, opt disk*</p>	
Memory	<p><b>1GB or 2GB std</b>, 8GB max<sup>8</sup>, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available;  <i>Non-italics:</i> standard memory in one socket; three sockets available;  <b>D2U:</b> <b>PC2-5300 667MHz DDR2</b>, non-parity, dual-channel capable;  <i>Others:</i> <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable</p>		<p>* 2nd Disk Bay is only available on some models</p>	
Graphics	<p><i>Some:</i> <b>ATI™ Radeon™ 3100</b>, int graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D conn, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI graphics adapter  <i>Some:</i> <b>NVIDIA® GeForce® 9300 GE</b>, PCI Express® x16 adapter, 256MB, one analog VGA DB-15 conn via cable, one DVI-I conn, S-Video out for TV-out, HDCP, DirectX 10, 30 watts</p>		<p>Slot 1: half-length, full-height, PCIe 2.0 x1                  Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)**                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>	
SATA disk	<p><b>160GB or 250GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
SATA controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support  <i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>			
SATA DVD	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>			
SATA DVD±RW	<p>Two SATA cables (each 1-drop to device), four SATA connectors on planar</p>			
SATA cables	<p>None</p>			
eSATA port	<p>None</p>			
EIDE controller	<p>None</p>			
Diskette drive	<p>None</p>			
Media reader	<p>None</p>			
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>			
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>			
Rear ports	<p>Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45),  <b>B9U:</b> monitor (VGA DB-15, DVI-I), S-Video out;  <i>Others:</i> monitor (VGA DB-15, DVI-D)</p>			
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>		<p>Supports ThinkVantage® technologies</p>	
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>			
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>		<p>GREENGUARD® certified RoHS-compliant</p>	
Speaker	<p>One internal speaker for business audio</p>			
Ethernet	<p>Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0</p>			
Modem	<p>None</p>			
Security chip	<p>Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant</p>		<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ Other ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>			
Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>			
Power supply	<p>280 watts with variable speed fan, autosensing, 80% PSU</p>			
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>			
- <i>Some:</i> Genuine Windows® XP Professional (preinstalled via downgrade rights in Windows Vista® Business)	<p>1GB PC2-5300 CL5 DDR2 UDIMM 73P4984                  2GB PC2-5300 CL5 DDR2 UDIMM 73P4985                  1GB PC2-6400 DDR2 UDIMM 41U2977                  2GB PC2-6400 DDR2 UDIMM 41U2978</p>			
- <i>Some:</i> Genuine Windows Vista Business 32	<p>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990                  Super Multi-Burner DL DVD±RW SATA Drive 41N5620</p>			
- <i>Some:</i> Genuine Windows Vista Business 64	<p>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636                  NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</p>			
♦ <i>Vista models:</i> Vista Premium logo	<p>More accessories on O-A62 sheet</p>			
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>			
• Roxio® Creator® Business Edition (DVD±RW)				
• Roxio MyDVD® (DVD±RW)				
• Corel® WinDVD® (DVD, DVD±RW)				

See footnotes for important warranty information  
 US models announced August 12, September 9, or December 9, 2008  
 US models withdrawn effective July 2009, August 2009, or March 2010

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	Vista preload	Global (G) GMP (P)	Avail date
A62	7061-A1U	4x4	Athlon X2 5400B	2.8	Dual	2GB	160GB <sup>2</sup>	None	DVD±RW	3100	VGA, DVI-D	Bus32	G P	Sep 08

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	<p><i>Stability and manageability for large enterprise and mid-market</i>  <b>AMD® Athlon™ X2 Dual-Core Processor 5400B</b> with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache</p>		<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 														
Implementation	Processor in Socket AM2																
Memory	<p><b>2GB std, 8GB max<sup>8</sup>, PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, four 240-pin DIMM sockets;  <i>Italics:</i> standard memory in two sockets; two sockets available</p>																
Graphics	<p><b>ATI™ Radeon™ 3100</b>, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter</p>																
SATA disk	<p><b>160GB</b>, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts</p>		<p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader/diskette)                  Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCIe 2.0 x1                  Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max)                  Slot 3: half-length, full-height, 32-bit PCI 2.3                  Slot 4: half-length, full-height, 32-bit PCI 2.3</p>														
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support																
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive																
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors																
eSATA port	None																
EIDE controller	None																
Diskette drive	None																
Media reader	None																
Chipset	<p><b>AMD 780V Chipset</b> with HyperTransport™ 3.0 and PCI Express® 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O</p>																
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)																
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)																
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)																
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)																
Audio	High Definition (HD) Audio, Realtek® ALC662 codec																
Speaker	One internal speaker for business audio																
Ethernet	Gigabit ethernet on planar, Marvell® 88E8070, Wake on LAN®, ASF 2.0																
Modem	None																
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant																
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo																
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo																
Power supply	280 watts with variable speed fan, manual switch																
<b>Preloaded operating system<sup>20</sup></b>	<p>- Genuine Windows® Vista® Business 32                  ↗ Vista Premium logo</p>		<p>Supports ThinkVantage® technologies</p>														
<b>Preloaded applications<sup>5</sup></b>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>																
	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC2-6400 DDR2 UDIMM</td> <td>41U2977</td> </tr> <tr> <td>2GB PC2-6400 DDR2 UDIMM</td> <td>41U2978</td> </tr> <tr> <td>250GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>41N3015</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>ATI Radeon HD 3470 256MB (DP, VGA)</td> <td>45K1636</td> </tr> <tr> <td>NVIDIA® GeForce® 9500GT 512MB (DP, DVI)</td> <td>45K1635</td> </tr> </table> <p>More accessories on O-A62 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                  Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		1GB PC2-6400 DDR2 UDIMM	41U2977	2GB PC2-6400 DDR2 UDIMM	41U2978	250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635	<p>GREENGUARD® certified                  RoHS-compliant</p>
1GB PC2-6400 DDR2 UDIMM	41U2977																
2GB PC2-6400 DDR2 UDIMM	41U2978																
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015																
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NVIDIA® GeForce® 9500GT 512MB (DP, DVI)	45K1635																
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↗ 3-year parts and labor</li> <li>↗ International Warranty Service<sup>9</sup></li> <li>↗ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↗ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↗ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↗ Post warranty maintenance services available</li> <li>↗ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>														

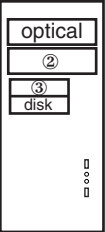
See footnotes for important warranty information  
 US model announced August 12, 2008  
 US model withdrawn effective March 2010

# ThinkCentre® A62 Tower (3656) - GMP - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	ENERGY STAR 5.0	Vista preload	Global (G) GMP (P)	Avail date
A62	3656-AAU	4x4	Athlon X2 5400B	2.8	Dual	2GB	160GB <sup>2</sup>	None	DVD±RW	3100	VGA, DVI-D	None	Bus32	G P	Jan 09

- This model is part of the Global Models Plus (GMP) program with limited onsite service<sup>3</sup> 3-year limited warranty

Positioning Processor	Stability and manageability for large enterprise and mid-market AMD® Athlon™ X2 Dual-Core Processor 5400B with dual-core, virtualization technology, integrated DDR2 memory controller, and 1MB dedicated L2 cache Processor in Socket AM2										<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>		
Implementation	Processor in Socket AM2										<ul style="list-style-type: none"> <li>Bay ① 5.25", 1.6" high, access, std optical</li> <li>Bay ② 5.25", 1.6" high, access, open</li> <li>Bay ③ 3.5", 1" high, access, open (reader/diskette)</li> <li>Bay ④ 3.5", 1" high, no access, std disk</li> </ul>		
Memory	2GB std, 8GB max <sup>8</sup> , PC2-6400 800MHz DDR2, non-parity, dual-channel capable, four 240-pin DIMM sockets; <i>Italics:</i> standard memory in two sockets; two sockets available										Slot 1: half-length, full-height, PCIe 2.0 x1 Slot 2: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 3: half-length, full-height, 32-bit PCI 2.3 Slot 4: half-length, full-height, 32-bit PCI 2.3		
Graphics	ATI™ Radeon™ 3100, integrated graphics in 780V, uses main memory (up to 512MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 independent monitors with optional dual-head ATI graphics adapter												
SATA disk	160GB, SATA 3.0Gb/s 7200 rpm, vibration dampening mounts												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in SB700, RAID 0/1 support												
SATA DVD±RW	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA cables	Two SATA cables (each 1-drop to device), four SATA connectors												
eSATA port	None												
EIDE controller	None												
Diskette drive	None												
Media reader	None												
Chipset	AMD 780V Chipset with HyperTransport™ 3.0 and PCI Express 2.0 support; SB700 south bridge for SATA 3.0Gb/s with RAID 0/1 support, ATA-133 EIDE, PCI 2.3, USB, LPC bus / Winbond® W83627DHG Super I/O										<b>Security</b> <ul style="list-style-type: none"> <li>• Security chip (see information on left)</li> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse, diskette</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Six USB 2.0, serial (9-pin), parallel (25-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	One internal speaker for business audio												
Ethernet	Gigabit ethernet on planar, Marvel® 88E8070, Wake on LAN®, ASF 2.0												
Modem	None												
Security chip	Winbond WPCT200 SafeKeeper™ Trusted Platform Module, TCG 1.2-compliant												
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo												
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo												
Power supply	280 watts with variable speed fan, autosensing, 80% PSU												
<b>Preloaded operating system</b> <sup>20</sup>	<ul style="list-style-type: none"> <li>- Genuine Windows® Vista® Business 32</li> <li>◇ Vista Premium logo</li> </ul>										<b>Accessories</b> <ul style="list-style-type: none"> <li>1GB PC2-6400 DDR2 UDIMM 41U2977</li> <li>2GB PC2-6400 DDR2 UDIMM 41U2978</li> <li>250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 9500GT 512MB (DP, DVI) 45K1635</li> <li>More accessories on O-A62 sheet</li> </ul> Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
<b>Preloaded applications</b> <sup>5</sup>	<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• McAfee® VirusScan® Plus (30 days of virus definitions)</li> <li>• Lenovo System Toolbox</li> <li>• Adobe® Reader®</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>										Supports ThinkVantage® technologies  GREENGUARD® certified RoHS-compliant  <b>Limited Warranty</b> <sup>1</sup> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus™ part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>		

See footnotes for important warranty information  
 US model announced December 9, 2008  
 US model withdrawn effective March 2010

Partial list of accessories supported on ThinkCentre A62

**Memory**

1GB PC2-5300 CL5 DDR2 UDIMM <sup>40</sup>	73P4984	<i>ann 06/28/05</i>
1GB PC2-5300 CL5 DDR2 UDIMM (25-Pack)	51J0501	<i>ann 03/17/09</i>
2GB PC2-5300 CL5 DDR2 UDIMM	73P4985	<i>ann 09/26/06</i>
2GB PC2-5300 CL5 DDR2 UDIMM (25-Pack)	51J0547	<i>ann 03/17/09</i>
1GB PC2-6400 DDR2 UDIMM	41U2977	<i>ann 09/26/06</i>
1GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0549	<i>ann 03/17/09</i>
2GB PC2-6400 DDR2 UDIMM	41U2978	<i>ann 01/08/08</i>
2GB PC2-6400 DDR2 UDIMM (25-Pack)	51J0550	<i>ann 03/17/09</i>

<sup>40</sup> When PC2-5300 is installed with systems that have PC2-6400 memory, PC2-6400 will operate at the PC2-5300 memory speed.

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	<i>ann 09/26/06</i>
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	<i>ann 09/26/06</i>

**Storage and removable storage**

160GB SATA 3.0Gb/s Disk (7200 rpm)	09N4254	<i>ann 05/19/03</i>
250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	<i>ann 01/24/06</i>
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	<i>ann 11/06/07</i>

USB 2.0 Essential Memory Key 4GB	45J7904	<i>ann 06/24/08</i>
USB 2.0 Essential Memory Key 8GB	45J7905	<i>ann 07/15/08</i>
USB 2.0 Essential Memory Key 32GB	45K1258	<i>ann 10/28/08</i>
USB 2.0 Ultra Secure Memory Key 1GB	45J5915	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 2GB	45J5916	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 4GB	45J5917	<i>ann 08/26/08</i>
USB 2.0 Ultra Secure Memory Key 8GB	45J5918	<i>ann 08/26/08</i>
USB 2.0 Portable 320GB Hard Disk	45K1689	<i>ann 03/17/09</i>
USB 2.0 Portable 500GB Hard Disk	45K1690	<i>ann 05/26/09</i>
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	<i>ann 11/18/08</i>
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	<i>ann 11/18/08</i>
eSATA/USB 2.0 Secure 500GB Hard Drive	57Y4400	<i>ann 01/07/10</i>
USB 2.0 Super Multi-Burner Drive	41N5565	<i>ann 01/23/07</i>
USB 2.0 Portable DVD Burner	43N3264	<i>ann 01/05/10</i>

**Graphics**

Desktop 9486/7057/7062/3658/9945 support Low Profile 35 watts max:

ATI™ Radeon™ HD 3470 256MB (DP, VGA)	45K1636	<i>ann 11/18/08</i>
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Tower 9705/9935/9485/9625/7061/3656 support 75 watts max:

ATI Radeon HD 3470 256MB (DP, VGA)	45K1636	<i>ann 11/18/08</i>
NVIDIA® GeForce® 9500 GT 512MB (DP, DVI)	45K1635	<i>ann 11/18/08</i>

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	<i>ann 06/21/05</i>
Preferred Pro Full Size PS/2 Keyboard	31P7415	<i>ann 06/04/02</i>
Enhanced Performance USB Keyboard	73P2620	<i>ann 03/23/04</i>
Ultraslim Wireless Keyboard and Mouse <sup>52</sup>	57Y4700	<i>ann 09/15/09</i>
Lenovo® USB Fingerprint Keyboard	73P4730	<i>ann 02/22/05</i>
Lenovo USB Smartcard Keyboard	51J0155	<i>ann 03/24/09</i>

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Mini Optical Mouse - Black (USB)	55Y9308	<i>ann 05/19/09</i>
Lenovo Mini Optical Mouse - White (USB)	55Y9309	<i>ann 05/19/09</i>
Lenovo Optical Mouse (USB)	06P4069	<i>ann 05/21/03</i>
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	<i>ann 08/27/02</i>
Lenovo Laser Mouse (USB)	41U3074	<i>ann 01/23/07</i>
Lenovo Wireless Laser Mouse - Black <sup>52</sup>	45K1696	<i>ann 11/25/08</i>
Lenovo Wireless Laser Mouse - Red/Black <sup>52</sup>	51J0198	<i>ann 11/25/08</i>

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

USB 2.0 Lenovo Webcam	40Y8519	<i>ann 08/29/06</i>
ThinkPad® In-Ear Headphones	57Y4488	<i>ann 01/07/10</i>

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	<i>ann 12/29/03</i>
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	<i>ann 09/30/08</i>
USB Gemplus GemPC Smart Card Reader	41N3040	<i>ann 02/21/06</i>

<sup>56</sup>Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" Monitor	5047HB2	<i>ann 10/20/09</i>
ThinkVision L1900p 19" Monitor	4431HE1	<i>ann 11/11/08</i>
ThinkVision L1951p Wide 19" Monitor	2448HB6	<i>ann 10/20/09</i>
ThinkVision L2250p Wide 22" Monitor	2572HB6	<i>ann 10/20/09</i>
ThinkVision L2251p Wide 22" Monitor	2572HD6	<i>ann 10/20/09</i>
ThinkVision L2251x Wide 22" Monitor	2578HB6	<i>ann 10/20/09</i>
ThinkVision L2440p Wide 24" Monitor	4420HB2	<i>ann 09/17/08</i>

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	<i>ann 05/12/09</i>
ThinkVision USB Soundbar	40Y7616	<i>ann 08/23/05</i>
ThinkVision Soundbar	45K1263	<i>ann 09/16/08</i>
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	<i>ann 12/29/03</i>
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	<i>ann 09/30/08</i>
Radial Arm	19K4464	<i>ann 05/05/00</i>

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

**Medialess License Key (MLK)**

Microsoft® Office 2007 Basic, English	43R1528	<i>ann 07/03/07</i>
Microsoft Office 2007 Small Business, Engl	43R1534	<i>ann 07/03/07</i>
Microsoft Office 2007 Professional, English	43R1531	<i>ann 07/03/07</i>

For more information on desktop accessories, please visit:  
[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
[www.lenovo.com/support/desktopaccessories](http://www.lenovo.com/support/desktopaccessories)  
[www.lenovo.com/support/security](http://www.lenovo.com/support/security)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre A63 Tower



Lenovo ThinkCentre A63 Tower



Lenovo ThinkCentre A63 Tower



Lenovo ThinkCentre A63 Tower with  
Lenovo ThinkVision® monitor



Lenovo ThinkCentre A63 Tower



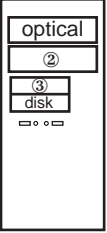
Lenovo ThinkCentre A63 Tower

# ThinkCentre® A63 Tower (4013) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>6</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Int speaker	Win7 preload	Global Educ	Avail date
4013-A7U	4x4	Sempron 140	2.7	Single	1GB	250GB <sup>2</sup>	None	DVD	None	3000	VGA, DVI-D	Int	Prem 32	None	Feb 10
4013-B2U	4x4	Athlon II X2 240	2.8	Dual	1GB	250GB	None	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 32	None	May 10
4013-B4U	4x4	Athlon II X2 240	2.8	Dual	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Int	Prem 32	None	Jun 10
4013-B3U	4x4	Athlon II X2 240	2.8	Dual	4GB	500GB	None	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 64	None	Jun 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Optimized for small and medium businesses <b>AMD® Sempron™ Processor 140</b> with single-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 1MB L2 cache or <b>AMD Athlon™ II X2 Processor 240</b> with dual-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core) Processor in Socket AM3	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation		
Memory	<b>1GB, 3GB, or 4GB std.</b> 4GB max, <b>UDIMM, PC3-8500 1066MHz DDR3</b> , two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter	Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA disk(s)	<b>250GB, 320GB, or 500GB</b> , SATA 3.0Gb/s 7200 rpm	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup> Drive	
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors on planar	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	Supports ThinkVantage® technologies
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® 7 Home Premium 32	1GB PC3-8500 DDR3 UDIMM 45J5434	
- <i>Some:</i> Genuine Windows 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435	
- <i>Some:</i> Genuine Windows 7 Professional 64	500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990	
	1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918	
	DVD-ROM DL SATA 1.5Gb/s 16X-48X Max 41N5618	
	Super Multi-Burner DL DVD±RW SATA Drive 41N5620	
	NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397	
	More accessories on O-A63 sheet	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• ThinkVantage Product Recovery	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• Password Manager		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• ThinkVantage Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Adobe Flash® Player		
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		
		<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>

See footnotes for important warranty information  
 US models announced January 12, May 4, or May 25, 2010  
 US models withdrawn effective May or December 2010

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 (ALGS1-1) December 2010



# ThinkCentre® A63 Tower (5043) - TS (XP with Win 7 License) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Int speaker	Preload	Recovery DVD	Global Educ	Avail date
5043-A1U	4x4	Athlon II X3 435	2.9	Triple	2GB	320GB <sup>2</sup>	No	DVD±RW	No	3000	VGA, DVI-D	No	XP Pro	Pro 32	No	Feb 10
5043-A3U	4x4	Athlon II X2 240	2.8	Dual	1GB	250GB	No	DVD±RW	No	3000	VGA, DVI-D	No	XP Pro	Pro 32	No	Feb 10
5043-A4U	4x4	Athlon II X2 240	2.8	Dual	2GB	320GB	No	DVD±RW	No	3000	VGA, DVI-D	No	XP Pro	Pro 32	No	Feb 10
5043-A5U	4x4	Athlon II X2 245	2.9	Dual	2GB	320GB	No	DVD±RW	No	3000	VGA, DVI-D	No	XP Pro	Pro 32	No	Feb 10

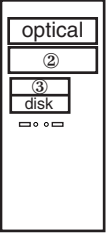
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 3-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>Optimized for small and medium businesses</i>  <b>AMD® Athlon™ II X2 Processor 240 or 245</b> with <b>dual-core</b>, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Athlon II X3 Processor 435</b> with <b>triple-core</b>, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core)                      Processor in Socket AM3</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>			
Implementation														
Memory	<p><b>1GB or 2GB std</b>, 4GB max, <b>UDIMM</b>, two 240-pin DIMM sockets;  <i>Non-italics:</i> standard memory in 1 socket; 1 socket available;                      A1U: <b>PC3-10600 1333MHz DDR3</b>;                      A3U/A4U/A5U: <b>PC3-8500 1066MHz DDR3</b></p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, open (reader)                      Bay ④ 3.5", 1" high, no access, std disk</p>			
Graphics	<p><b>ATI™ Radeon™ 3000</b>, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter</p>										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, PCIe 2.0 x1                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>			
SATA disk(s)	<p><b>250GB or 320GB</b>, SATA 3.0Gb/s 7200 rpm                      Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive                      SATA Controller Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors</p>												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>	
SATA DVD±RW														
SATA Controller														
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O</p>												<p>Supports ThinkVantage® technologies</p>	
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)													
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)													
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)													
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	None													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch													
<b>Preloaded operating system<sup>20</sup></b>	<p>Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)</p>													
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• ThinkVantage Product Recovery</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo System Toolbox</li> <li>• Norton™ Internet Security 2009 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD±RW)</li> </ul>													
<b>Accessories</b>	<ul style="list-style-type: none"> <li>1GB PC3-8500 DDR3 UDIMM 45J5434</li> <li>2GB PC3-8500 DDR3 UDIMM 45J5435</li> <li>1GB PC3-10600 DDR3 UDIMM 57Y4389</li> <li>2GB PC3-10600 DDR3 UDIMM 57Y4390</li> <li>500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990</li> <li>1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918</li> <li>Super Multi-Burner DL DVD±RW SATA Drive 41N5620</li> <li>ATI Radeon HD 3470 256MB (DP, VGA) 45K1636</li> <li>NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397</li> </ul> <p>More accessories on O-A63 sheet                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>													
												<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>		

See footnotes for important warranty information  
 US models announced January 12, 2010  
 US models withdrawn effective March 2010

Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Int speaker	Win7 preload	Global Educ	Avail date
5043-AEU	4x4	Sempron 140	2.7	Single	2GB	250GB <sup>2</sup>	None	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 32	None	Feb 10
5043-AFU	4x4	Athlon II X2 240	2.8	Dual	2GB	250GB	None	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 32	None	Feb 10
5043-AGU	4x4	Athlon II X3 435	2.9	Triple	3GB	320GB	None	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 32	None	Feb 10

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 3-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	<p><i>Optimized for small and medium businesses</i></p> <p><b>AMD® Sempron™ Processor 140</b> with single-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 1MB L2 cache or</p> <p><b>AMD Athlon™ II X2 Processor 240</b> with dual-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or</p> <p><b>AMD Athlon II X3 Processor 435</b> with triple-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core)</p> <p>Processor in Socket AM3</p>	<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                  Bay ② 5.25", 1.6" high, access, open                  Bay ③ 3.5", 1" high, access, open (reader)                  Bay ④ 3.5", 1" high, no access, std disk</p>												
Implementation	Processor in Socket AM3	<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)</p> <p>Slot 2: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 3: half-length, full-height, PCIe 2.0 x1</p> <p>Slot 4: half-length, full-height, 32-bit PCI 2.3</p>												
Memory	<p><b>2GB or 3GB std, 4GB max, UDIMM, PC3-10600 1333MHz DDR3</b>, two 240-pin DIMM sockets;</p> <p><i>Italics:</i> standard memory in both sockets; no sockets avail;</p> <p><i>Non-italics:</i> standard memory in one socket; one socket available</p>													
Graphics	<p><b>ATI™ Radeon™ 3000</b>, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter</p>	<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                         <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> </ul>												
SATA disk(s)	<p><b>250GB or 320GB</b>, SATA 3.0Gb/s 7200 rpm</p> <p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p> <p>Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors</p>													
SATA DVD±RW	Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors													
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors													
eSATA port	None													
Diskette drive	None													
Media reader	None													
Chipset	<p><b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O</p>													
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	Supports ThinkVantage technologies												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	GREENGUARD® certified												
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	RoHS-compliant												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec													
Speaker	Internal speaker for business audio													
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®													
Modem	None													
Security chip	None													
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo													
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo													
Power supply	280 watts with variable speed fan, manual switch													
<b>Preloaded operating system</b> <sup>20</sup>	<p>- Genuine Windows® 7 Professional 32</p>													
<b>Preloaded applications</b> <sup>5</sup> (only some listed)	<ul style="list-style-type: none"> <li>• ThinkVantage Product Recovery</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> </ul>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td> <td>57Y4397</td> </tr> </table> <p>More accessories on O-A63 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>	1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397
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		<p><b>Limited Warranty</b><sup>1</sup></p> <ul style="list-style-type: none"> <li>↪ 3-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5955)</li> <li>• 3-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5956)</li> <li>• 4-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5957)</li> <li>• 4-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5958)</li> <li>• 4-year LOR 24x7, 4 hour response (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>												

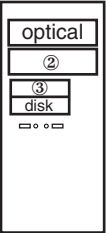
See footnotes for important warranty information  
 US models announced January 12, 2010  
 US models withdrawn effective May or December 2010

# ThinkCentre® A63 Tower (6674) - XP with Win 7 License - withdrawn

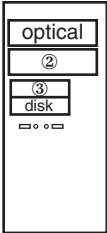
Personal Systems Reference (PSREF)

Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>a</sup>	SATA disk	2nd Disk Bay	SATA optical	Integrated graphics	Monitor connectors	Int speaker	Chassis intr switch	Recovery Preload	Global DVD	Educ	Avail date
6674-A4U	4x4	Athlon II X3 435	2.9	Triple	2GB	320GB <sup>b</sup>	No	DVD±RW	3000	VGA, DVI-D			XP Pro	Pro 32	None	Feb 10
6674-A6U	4x4	Athlon II X2 240	2.8	Dual	1GB	250GB	No	DVD	3000	VGA, DVI-D			XP Pro	Pro 32	None	Feb 10
6674-A8U	4x4	Athlon II X2 245	2.9	Dual	2GB	320GB	No	DVD±RW	3000	VGA, DVI-D	Int	Switch	XP Pro	Pro 32	None	Feb 10
6674-AFU	4x4	Athlon II X2 245	2.9	Dual	2GB	320GB	No	DVD±RW	3000	VGA, DVI-D	Int		XP Pro	Pro 32	None	Feb 10

- *These models have a 3-year limited warranty<sup>1</sup>*

Positioning Processor	<p><i>Optimized for small and medium businesses</i>  <b>AMD® Athlon™ II X2 Processor 240</b> or <b>245</b> with <b>dual-core</b>, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or <b>AMD Athlon II X3 Processor 435</b> with <b>triple-core</b>, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core)                      Processor in Socket AM3</p>										<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul>																														
Implementation																																									
Memory	<p><b>1GB</b> or <b>2GB std.</b>, 4GB max, <b>UDIMM</b>, two 240-pin DIMM sockets;  <i>Non-italics:</i> standard memory in 1 socket; 1 socket available;  <b>A4U:</b> <b>PC3-10600 1333MHz DDR3;</b>  <b>A6U/A8U/AFU:</b> <b>PC3-8500 1066MHz DDR3</b></p>										<p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, opt reader                      Bay ④ 3.5", 1" high, no access, std disk</p>																														
Graphics	<p><b>ATI™ Radeon™ 3000</b>, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter</p>										<p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, PCIe 2.0 x1                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																														
SATA disk(s)	<p><b>250GB</b> or <b>320GB</b>, SATA 3.0Gb/s 7200 rpm</p>												<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>																												
SATA DVD	<p><i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> Drive</p>																																								
SATA DVD±RW	<p><i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>																																								
SATA Controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors</p>																																								
eSATA port	<p>None</p>																																								
Diskette drive	<p>None</p>																																								
Media reader	<p>None</p>																																								
Chipset	<p><b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O</p>												<p>Supports ThinkVantage technologies</p>																												
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																																								
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Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>																																								
Power supply	<p>280 watts with variable speed fan, manual switch</p>												<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																												
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p> <table border="0"> <tr> <td>- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)</td> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td></td> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td></td> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td></td> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td></td> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td></td> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td></td> <td>DVD-ROM DL SATA 1.5Gb/s 16X-48X Max</td> <td>41N5618</td> </tr> <tr> <td></td> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td></td> <td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td> <td>57Y4397</td> </tr> </table> <p>More accessories on O-A63 sheet                      Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>										- Windows® XP Professional preinstalled through downgrade rights in Genuine Windows 7 Professional (with Windows 7 Professional 32 Recovery DVD)	1GB PC3-8500 DDR3 UDIMM	45J5434		2GB PC3-8500 DDR3 UDIMM	45J5435		1GB PC3-10600 DDR3 UDIMM	57Y4389		2GB PC3-10600 DDR3 UDIMM	57Y4390		500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990		1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918		DVD-ROM DL SATA 1.5Gb/s 16X-48X Max	41N5618		Super Multi-Burner DL DVD±RW SATA Drive	41N5620		NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397				
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	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397																																							
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<ul style="list-style-type: none"> <li>• ThinkVantage Product Recovery</li> <li>• Client Security Solution™</li> <li>• ThinkVantage Productivity Center</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• Lenovo System Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2007 Trial (60-day)</li> <li>• Roxio® Creator® Business Edition (DVD±RW)</li> <li>• Roxio MyDVD® (DVD±RW)</li> <li>• Corel® WinDVD® (DVD, DVD±RW)</li> </ul>																																								

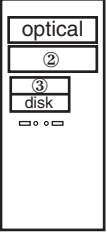
See footnotes for important warranty information  
 US models announced January 12, 2010  
 US models withdrawn effective October 2010

Type-model	Slot x bay	AMD processor	GHz	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Int speaker	Chassis intr switch	Win7 Preload	Global Educ	Avail date																
6674-ABU	4x4	Phenom II X4 B93	2.8	3GB	500GB <sup>2</sup>	No	DVD±RW	Media	3000	VGA, DVI-D	Int	Switch	Pro 32	None	Feb 10																
6674-ANU	4x4	Athlon II X2 240	2.8	2GB	250GB	No	DVD±RW		3000	VGA, DVI-D	Int		Pro 32	None	Feb 10																
6674-APU	4x4	Athlon II X3 435	2.9	2GB	250GB	No	DVD±RW		3000	VGA, DVI-D	Int		Pro 32	None	Feb 10																
6674-ARU	4x4	Sempron 140	2.7	2GB	250GB	No	DVD±RW		3000	VGA, DVI-D	Int		Pro 32	None	Feb 10																
6674-ASU	4x4	Athlon II X2 245	2.9	2GB	250GB	No	DVD±RW		3000	VGA, DVI-D	Int		Pro 32	None	Feb 10																
<ul style="list-style-type: none"> <li>• <b>These models have a 3-year limited warranty<sup>1</sup></b></li> <li>• <b>These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)</b></li> </ul>																															
Positioning Processor	<p><i>Optimized for small and medium businesses</i>  <b>AMD® Sempron™ Processor 140</b> with single-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 1MB L2 cache or  <b>AMD® Athlon™ II X2 Processor 240 or 245</b> with dual-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core) or  <b>AMD Athlon II X3 Processor 435</b> with triple-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, and 1.5MB L2 cache (512KB per core) or  <b>AMD Phenom™ II X4 Processor B93</b> with quad-core, 4000MHz HyperTransport Bus, AMD Virtualization (AMD-V) technology, AMD64 technology, int DDR3 memory controller, 2MB L2 cache (512KB per core), and 6MB shared L3 cache Processor in Socket AM3</p>								<p><b>Tower</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.3" D X 15.8" H</li> <li>• 175mm W X 440mm D X 402mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, diskette drive, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> <p>Bay ① 5.25", 1.6" high, access, std optical                      Bay ② 5.25", 1.6" high, access, open                      Bay ③ 3.5", 1" high, access, opt reader                      Bay ④ 3.5", 1" high, no access, std disk</p> <p>Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max)                      Slot 2: half-length, full-height, PCIe 2.0 x1                      Slot 3: half-length, full-height, PCIe 2.0 x1                      Slot 4: half-length, full-height, 32-bit PCI 2.3</p>																						
Memory	<p><b>2GB or 3GB std.</b>, 4GB max, <b>UDIMM</b>, two 240-pin DIMM sockets;  <i>Italics:</i> standard memory in both sockets; no sockets available;  <i>Non-italics:</i> standard memory in 1 socket; 1 socket available;  <b>ABU/APU/ARU/ASU: PC3-10600 1333MHz DDR3;</b>  <b>ANU: PC3-8500 1066MHz DDR3</b></p>								<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Parallel port I/O control</li> <li>• Individual USB port disablement</li> <li>• <i>Some:</i> Chassis intrusion switch</li> </ul>																						
Graphics	<p><b>ATI™ Radeon™ 3000</b>, integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter</p>								<p>Supports ThinkVantage technologies</p>																						
SATA disk(s)	<p><b>250GB or 500GB</b>, SATA 3.0Gb/s 7200 rpm</p>								<p>GREENGUARD® certified RoHS-compliant</p>																						
SATA DVD±RW	<p>Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive</p>								<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>3-year LOR 24x7, 4 hour response parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>																						
SATA Controller	<p>Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors</p>																														
eSATA port	<p>None</p>																														
Diskette drive	<p>None</p>																														
Media reader	<p><i>Some:</i> 25-in-1 media reader, internal USB 2.0</p>																														
Chipset	<p><b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O</p>																														
Front ports	<p>Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>																														
Rear ports	<p>Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)</p>																														
Rear audio ports	<p>Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)</p>																														
Internal connector	<p>Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)</p>																														
Audio	<p>High Definition (HD) Audio, Realtek® ALC662 codec</p>																														
Speaker	<p>Internal speaker for business audio</p>																														
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Modem	<p>None</p>																														
Security chip	<p>None</p>																														
Keyboard	<p>Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo</p>																														
Mouse	<p>Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo</p>																														
Power supply	<p>280 watts with variable speed fan, manual switch</p>																														
<p><b>Preloaded operating system<sup>20</sup></b></p> <ul style="list-style-type: none"> <li>- Genuine Windows® 7 Professional 32</li> </ul> <p><b>Preloaded applications<sup>5</sup> (only some listed)</b></p> <ul style="list-style-type: none"> <li>• ThinkVantage Product Recovery</li> <li>• Password Manager</li> <li>• ThinkVantage System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe® Reader®</li> <li>• Adobe Flash® Player</li> <li>• Skype™ for Windows</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> </ul> <p><b>Accessories</b></p> <table border="0"> <tr> <td>1GB PC3-8500 DDR3 UDIMM</td> <td>45J5434</td> </tr> <tr> <td>2GB PC3-8500 DDR3 UDIMM</td> <td>45J5435</td> </tr> <tr> <td>1GB PC3-10600 DDR3 UDIMM</td> <td>57Y4389</td> </tr> <tr> <td>2GB PC3-10600 DDR3 UDIMM</td> <td>57Y4390</td> </tr> <tr> <td>500GB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>43R1990</td> </tr> <tr> <td>1TB SATA 3.0Gb/s Disk (7200 rpm)</td> <td>45J7918</td> </tr> <tr> <td>Super Multi-Burner DL DVD±RW SATA Drive</td> <td>41N5620</td> </tr> <tr> <td>NVIDIA® GeForce® 310 512MB (DP, VGA)</td> <td>57Y4397</td> </tr> </table> <p>More accessories on O-A63 sheet</p> <p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>                      Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>																1GB PC3-8500 DDR3 UDIMM	45J5434	2GB PC3-8500 DDR3 UDIMM	45J5435	1GB PC3-10600 DDR3 UDIMM	57Y4389	2GB PC3-10600 DDR3 UDIMM	57Y4390	500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	Super Multi-Burner DL DVD±RW SATA Drive	41N5620	NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397
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2GB PC3-8500 DDR3 UDIMM	45J5435																														
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Super Multi-Burner DL DVD±RW SATA Drive	41N5620																														
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397																														

See footnotes for important warranty information  
 US models announced January 12, 2010  
 US models withdrawn effective March or December 2010

Type-model	Slot x bay	AMD processor	GHz	Core	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Media reader	Integrated graphics	Monitor connectors	Int speaker	Win7 preload	Global Educ	Avail date
5237-AAU	4x4	Athlon II X2 240	2.8	Dual	2GB	250GB <sup>2</sup>	No	DVD±RW	None	3000	VGA, DVI-D	Int	Pro 32	No	Feb 10

- This model has a 1-year limited warranty<sup>1</sup>
- This system is Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Optimized for small and medium businesses <b>AMD® Athlon™ II X2 Processor 240</b> with dual-core, 4000MHz HyperTransport™ Bus, AMD Virtualization™ (AMD-V™) technology, AMD64 technology, int DDR3 memory controller, and 2MB L2 cache (1MB per core)	<b>Tower</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 6.9" W X 17.4" D X 16.2" H</li> <li>• 175mm W X 442mm D X 412mm H</li> <li>• 24.2lb (11.0kg) in typical configuration</li> <li>• Handle on top front</li> <li>• Power button on top handle</li> <li>• Tilted front I/O for easy access</li> <li>• Toolless cover removal</li> <li>• Toolless disk, optical drive removal</li> <li>• Toolless adapter retention</li> </ul> 
Implementation	Processor in Socket AM3	
Memory	<b>2GB std</b> , 4GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets; <i>Non-italics</i> : standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 5.25", 1.6" high, access, open Bay ③ 3.5", 1" high, access, open (reader) Bay ④ 3.5", 1" high, no access, std disk
Graphics	<b>ATI™ Radeon™ 3000</b> , integrated in chipset, uses main memory (up to 256MB), one analog VGA DB-15 connector, one DVI-D connector, DirectX® 10, ATI Avivo™, SurroundView™, supports dual independent display; supports up to 4 monitors with optional dual-head ATI Radeon discrete graphics adapter	
SATA disk(s)	<b>250GB</b> , SATA 3.0Gb/s 7200 rpm	Slot 1: half-length, full-height, PCIe 2.0 x16 (75w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1 Slot 4: half-length, full-height, 32-bit PCI 2.3
SATA DVD	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive	
SATA Controller	Serial ATA, SATA 3.0Gb/s, integrated in SB710, four SATA connectors	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Serial port I/O control</li> <li>• Individual USB port disablement</li> </ul>
eSATA port	None	
Diskette drive	None	Supports ThinkVantage® technologies
Media reader	None	
Chipset	<b>AMD 760G Chipset</b> with HyperTransport 3.0 and PCI Express® 2.0 support; SB710 south bridge / ITE Tech® IT8720 Super I/O	GREENGUARD® certified RoHS-compliant
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Rear ports	Four USB 2.0, serial (9-pin), keyboard (PS/2), mouse (PS/2), ethernet (RJ-45), monitor (VGA DB-15, DVI-D)	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone-in (stereo, 3.5mm)	
Internal connector	Two USB 2.0 planar conn (1 used; one open for media reader or 2 rear USB ports)	
Audio	High Definition (HD) Audio, Realtek® ALC662 codec	
Speaker	Internal speaker for business audio	
Ethernet	Gigabit ethernet on planar, Marvell® 88E8057, Wake on LAN®	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400dpi, black, Lenovo logo	
Power supply	280 watts with variable speed fan, manual switch	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>
- Genuine Windows® 7 Professional 32	1GB PC3-10600 DDR3 UDIMM 57Y4389 2GB PC3-10600 DDR3 UDIMM 57Y4390 500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 1TB SATA 3.0Gb/s Disk (7200 rpm) 45J7918 Super Multi-Burner DL DVD±RW SATA Drive 41N5620 NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397 More accessories on O-A63 sheet	
<b>Preloaded applications<sup>5</sup></b> (only some listed)		
• ThinkVantage Product Recovery		
• Password Manager		
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• ThinkVantage Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Adobe Flash® Player		
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		

See footnotes for important warranty information  
 US model announced January 12, 2010  
 US model withdrawn effective December 2010

Partial list of accessories supported on ThinkCentre A63

**Memory**

1GB PC3-8500 DDR3 UDIMM <sup>40</sup>	45J5434	ann 11/18/08
1GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4421	ann 11/10/09
2GB PC3-8500 DDR3 UDIMM	45J5435	ann 11/18/08
2GB PC3-8500 DDR3 UDIMM (25-Pack)	57Y4422	ann 11/10/09
1GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4389	ann 01/12/10
1GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4419	ann 01/12/10
2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10

<sup>40</sup> When PC3-8500 is installed with systems that have PC3-10600 memory, PC3-10600 will operate at the PC3-8500 memory speed.

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Super Multi-Burner DL DVD±RW SATA Drive	41N5620	ann 09/26/06

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 160GB Hard Disk	43R2018	ann 11/18/08
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
eSATA/USB 2.0 Secure 500GB Hard Drive <sup>53</sup>	57Y4400	ann 01/07/10
USB 2.0 Portable DVD Burner	43N3264	ann 01/05/10

<sup>53</sup> USB-only attach.

**Graphics**

DisplayPort™ to Single-link DVI-D Cable <sup>50</sup>	45J7915	ann 08/05/08
NVIDIA® GeForce® 310 512MB (DP, VGA)	57Y4397	ann 02/02/10
NVIDIA GeForce 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10

<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphics card.

More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Preferred Pro Full Size PS/2 Keyboard	31P7415	ann 06/04/02
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
Ultraslim Wireless Keyboard and Mouse <sup>52</sup>	57Y4700	ann 09/15/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Wireless Laser Mouse - Black <sup>52</sup>	45K1696	ann 11/25/08
Lenovo Wireless Laser Mouse - Red/Black <sup>52</sup>	51J0198	ann 11/25/08

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup>Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

Lenovo D186 Wide 18.5" Monitor	2580AB1	ann 01/12/10
Lenovo L2230x Wide 21.5" Monitor	5453HB1	ann 06/10/10
ThinkVision® L1711p 17" Monitor	5047HB2	ann 10/20/09
ThinkVision L1900p 19" Monitor	4431HE1	ann 11/11/08
ThinkVision L1951p Wide 19" Monitor	2448HB6	ann 10/20/09
ThinkVision L2250p Wide 22" Monitor	2572HB6	ann 10/20/09
ThinkVision L2251p Wide 22" Monitor	2572HD6	ann 10/20/09
ThinkVision L2251x Wide 22" Monitor	2578HB6	ann 10/20/09
ThinkVision L2321x Wide 23" Monitor	4014HB6	ann 06/10/10
ThinkVision L2440p Wide 24" Monitor	4420HB2	ann 09/17/08

More information at [www.lenovo.com/thinkvision](http://www.lenovo.com/thinkvision)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
ThinkVision USB Soundbar	40Y7616	ann 08/23/05
ThinkVision Soundbar	45K1263	ann 09/16/08
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on desktop accessories, please visit:

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
[www.lenovo.com/support/desktopaccessories](http://www.lenovo.com/support/desktopaccessories)  
[www.lenovo.com/support/security](http://www.lenovo.com/support/security)

Other accessories at [www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Accessories Guide pdf at [www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)



Lenovo ThinkCentre A70 Small and  
Lenovo ThinkCentre A70 Tower



Lenovo ThinkCentre A70 Tower  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Small



Lenovo ThinkCentre A70 Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre A70 Tower



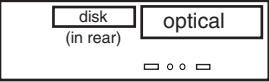
Lenovo ThinkCentre A70 Small

# ThinkCentre® A70 Small (7844) - TopSeller (Win 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
A70	7844-D4U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB <sup>2</sup>	DVD	GMA	Pro 32	None	Aug 10
A70	7844-C1U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-B4U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7844-P9U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P8U	4x2	Pentium E5800	3.20	2MB	2	4GB	320GB	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7844-P7U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	DVD±RW	GMA	Pro 64	None	Mar 11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty<sup>1</sup>
- These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning Processor	Quality, reliability, and security for small/medium businesses <b>Intel® Celeron® Processor E3300</b> or <b>E3400</b> with <b>dual-core</b> , 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5500</b> or <b>E5800</b> with <b>dual-core</b> , 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with <b>dual-core</b> , 1066MHz system bus, and 3MB L2 cache	<b>Small</b>	
Implementation	Processor in LGA775 socket	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Memory	<b>1GB, 2GB, or 4GB std, 4GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Slot 1: Low Profile, PCI Express x16 (45w max) Slot 2: Low Profile, PCI Express x1 Slot 3: Low Profile, PCI Express x1 Slot 4: Low Profile, 32-bit PCI 2.3	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [ <i>1GB models</i> ], 765MB [ <i>2GB models</i> ], or 1759MB [ <i>4GB models</i> ]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	<ul style="list-style-type: none"> <li>• Business black color; metal case</li> <li>• 13.1" W X 14.5" D X 3.8" H</li> <li>• 333mm W X 368mm D X 97mm H</li> <li>• 14.3 lb (6.5 kg) in maximum configuration</li> <li>• Highlighted optical drive button for easy access</li> <li>• System floor stand for vertical orientation</li> </ul>	
SATA disk	<b>320GB or 500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening mounts		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object: <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Boot sequence control</li> <li>• Serial port I/O control</li> <li>• USB port disablement</li> </ul> <p>Supports ThinkVantage® technologies</p> <p>RoHS-compliant</p> <p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	None		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo		
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	180 watts, universal, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435		
- <i>Some:</i> Genuine Windows 7 Professional 64	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618		
	DisplayPort™ to Single-link DVI-D Cable 45J7915		
	DisplayPort to VGA Monitor Cable 57Y4393		
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985		
	NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397		
<b>Preloaded applications<sup>5</sup></b> (all OSEs; only some listed)	More accessories on O-A70 sheet		
• Rescue and Recovery™	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>		
• ThinkVantage System Update	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

See footnotes for important warranty information  
 US models announced August 3, 2010 or February 8, 2011  
 US models withdrawn effective November 2011 or January 2012

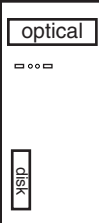


# ThinkCentre® A70 Tower (7099) - TopSeller (Windows 7) - withdrawn

Personal Systems Reference (PSREF)

Name	Type-model	Slot x bay	Processor	GHz	L2 cache	Cores	Memory <sup>8</sup>	SATA disk	2nd Disk Bay	SATA optical	Graphics	Win7 preload	Global Educ	Avail date
A70	7099-E6U	4x2	Pentium E5500	2.80	2MB	2	3GB	320GB <sup>2</sup>	None	DVD±RW	GMA	Prem 32	None	Aug 10
A70	7099-C2U	4x2	Celeron E3300	2.50	1MB	2	1GB	320GB	None	DVD	GMA	Pro 32	None	Aug 10
A70	7099-B8U	4x2	Pentium E5500	2.80	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7099-A5U	4x2	Core 2 Duo E7500	2.93	3MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 32	None	Aug 10
A70	7099-U3U	4x2	Celeron E3400	2.60	1MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7099-E5U	4x2	Pentium E5500	2.80	2MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Aug 10
A70	7099-U2U	4x2	Pentium E5800	3.20	2MB	2	2GB	320GB	None	DVD±RW	GMA	Pro 64	None	Mar 11
A70	7099-U1U	4x2	Core 2 Duo E7500	2.93	3MB	2	4GB	500GB	None	DVD±RW	GMA	Pro 64	None	Mar 11

• These small and medium business (SMB) models are part of the US TopSeller™ Program  
 • These models have a 1-year limited warranty<sup>1</sup>  
 • These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)

Positioning	Quality, reliability, and security for small/medium businesses	<b>Tower</b> <ul style="list-style-type: none"> <li>Business black color; metal case</li> <li>6.3" W X 14.0" D X 15.4" H</li> <li>160mm W X 355mm D X 392mm H</li> <li>15.4 lb (7.0 kg) in max configuration</li> <li>Non-slip designed handle on top front</li> <li>Power button on top handle</li> <li>Highlighted optical drive button for easy access</li> </ul>	
Processor	<b>Intel® Celeron® Processor E3300</b> or <b>E3400</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5500</b> or <b>E5800</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket		
Implementation	Processor in LGA775 socket		
Memory	<b>1GB, 2GB, 3GB, or 4GB std, 4GB max<sup>8</sup>, PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets avail; <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 5.25", 1.6" high, access, std optical Bay ② 3.5", 1" high, no access, std disk	
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory (up to 253MB [1GB models], 765MB [2GB models], 1277MB [3GB models], or 1759MB [4GB models]), one analog VGA DB-15 connector, DirectX® 10, supports dual independent display with optional ADD2 adapter	Slot 1: half-length, full-height, PCI Express x16 (45w max) Slot 2: half-length, full-height, PCI Express x1 Slot 3: half-length, full-height, PCI Express x1 Slot 4: half-length, full-height, 32-bit PCI 2.3	
SATA disk	<b>320GB</b> or <b>500GB</b> , SATA 3.0Gb/s 7200 rpm, vibration dampening	<b>Security</b> <ul style="list-style-type: none"> <li>One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>- Padlock loop (in rear for opt padlock)</li> <li>- Security slot (in rear for optional Kensington® Microsaver® cable)</li> </ul> </li> <li>Power-on password</li> <li>Boot sequence control</li> <li>Serial port I/O control</li> <li>USB port disablement</li> </ul>	
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in ICH7		
SATA DVD	<i>Some:</i> DVD-ROM DL SATA 1.5Gb/s 16-48X Max <sup>4</sup> Drive		
SATA DVD±RW	<i>Some:</i> Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA cables	Two SATA cables (each 1-drop to device), three SATA connectors on planar		
eSATA port	None		
Diskette drive	None		
Media reader	None		
Chipset	<b>Intel G41 Express Chipset</b> (PCI Express® x16), I/O Controller Hub 7 [ICH7] (SATA 3.0Gb/s, PCI Express x1, PCI 2.3, USB, LPC bus)		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, serial (9-pin), ethernet (RJ-45), monitor (VGA DB-15)		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	None		
IEEE 1394	None		
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL	Supports ThinkVantage® technologies	
Intel AMT	None		
Modem	None		
Security chip	None	RoHS-compliant	
Keyboard	Lenovo Slim USB Keyboard (USB connector), black, Lenovo® logo	<b>Limited Warranty<sup>1</sup></b> <ul style="list-style-type: none"> <li>↪ 1-year parts and labor</li> <li>↪ International Warranty Service<sup>9</sup></li> <li>↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</li> <li>↪ Onsite service upgrade options (in eligible locations):<sup>7</sup> <ul style="list-style-type: none"> <li>• 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951)</li> <li>• 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949)</li> <li>• 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952)</li> <li>• 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950)</li> <li>• 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></li> <li>↪ Post warranty maintenance services available</li> <li>↪ 24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</li> </ul>	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo		
Power supply	180 watts, universal, manual switch		
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>		
- <i>Some:</i> Genuine Windows® 7 Home Premium 32	2GB PC3-8500 DDR3 UDIMM 45J5435		
- <i>Some:</i> Genuine Windows 7 Professional 32	DVD-ROM DL SATA 1.5Gb/s 16-48X Max 41N5618		
- <i>Some:</i> Genuine Windows 7 Professional 64	DisplayPort™ to Single-link DVI-D Cable 45J7915		
	DisplayPort to VGA Monitor Cable 57Y4393		
	ADD2 DVI-D Monitor Connection (HDCP) 43R1985		
	NVIDIA® GeForce® 310 512MB (DP, VGA) 57Y4397		
	More accessories on O-A70 sheet		
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a> Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>		
• Rescue and Recovery™			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Norton™ Internet Security 2011 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft Office 2010 preloaded; purchase product key to activate			
• Corel® Burn.Now™ (DVD±RW)			
• Corel DVD MovieFactory® (DVD±RW)			

See footnotes for important warranty information  
 US models announced August 3, 2010 or February 8, 2011  
 US models withdrawn effective November 2011 or January 2012

**Memory**2GB PC3-8500 DDR3 UDIMM 45J5435 *ann 11/18/08*

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)**Optical**DVD-ROM DL SATA 1.5Gb/s 16X-48X Max<sup>4</sup> 41N5618 *ann 09/26/06*Lenovo® Super Multi-Burner SATA Drive 0A65618 *ann 08/23/11***Storage and removable storage**250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*USB 3.0 Secure 500GB Hard Drive 0A65619 *ann 11/29/11*USB 3.0 Secure 750GB Hard Drive 0A65616 *ann 11/29/11*Slim USB Portable DVD Burner 0A33988 *ann 06/14/11***Graphics***Small 7844 support Low Profile:*DisplayPort™ to Single-link DVI-D Cable<sup>50</sup> 45J7915 *ann 08/05/08*DisplayPort to VGA Monitor Cable<sup>50</sup> 57Y4393 *ann 08/04/09*DisplayPort to DisplayPort Monitor Cable<sup>50</sup> 0A36537 *ann 09/13/11*ADD2 DVI-D Monitor Connection (HDCP) 43R1985 *ann 11/06/07*

NVIDIA® Quadro® 1GB 600

(DP, DVI with a DVI to VGA converter) 0A36183 *ann 10/26/10*NVIDIA GeForce® 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*

NVIDIA GeForce 310 512MB DMS59

(2-DVI or 2-VGA via DMS59 dongles) 57Y4167 *ann 03/02/10**Tower 7099 support 75 watts max:*DisplayPort to Single-link DVI-D Cable<sup>50</sup> 45J7915 *ann 08/05/08*DisplayPort to VGA Monitor Cable<sup>50</sup> 57Y4393 *ann 08/04/09*DisplayPort to DisplayPort Monitor Cable<sup>50</sup> 0A36537 *ann 09/13/11*ADD2 DVI-D Monitor Connection (HDCP) 43R1985 *ann 11/06/07*NVIDIA Quadro 1GB 600 (DP, DVI) 0A36183 *ann 10/26/10*NVIDIA GeForce 310 512MB (DP, VGA) 57Y4397 *ann 02/02/10*NVIDIA GeForce 310 512MB DMS59 57Y4167 *ann 03/02/10*<sup>50</sup> Attaches to the ThinkCentre compatible DisplayPort graphic card.More information at [www.lenovo.com/support/graphiccards](http://www.lenovo.com/support/graphiccards)**Keyboard**Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*Ultraslim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 *ann 04/05/11*ThinkPad USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*Lenovo USB Fingerprint Keyboard 73P4730 *ann 02/22/05*Lenovo USB Smartcard Keyboard 51J0155 *ann 03/24/09*<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)**Mouse**Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 *ann 08/27/02*Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*Lenovo Wireless Laser Mouse<sup>52</sup> 0A36188 *ann 12/20/11*More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)**Multimedia**ThinkPad In-Ear Headphones with mic<sup>60</sup> 57Y4488 *ann 01/07/10*<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.**Modem**USB 2.0 Lenovo Modem 43R1814 *ann 02/26/08***Security**Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.**Monitors**ThinkVision® L1711p 17" (VGA, DVI-D) 5047HB2 *ann 10/20/09*ThinkVision L1900p 19" (VGA, DVI-D) 4431HE1 *ann 11/11/08*ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)<sup>69</sup> 2448MB6 *ann 09/13/11*ThinkVision L2250p Wide 22" (VGA, DVI-D) 2572HB6 *ann 10/20/09*ThinkVision L2251x Wide 22" (VGA, DP) 2578HB6 *ann 10/20/09*ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)<sup>69</sup> 2572MB6 *ann 09/13/11*ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)<sup>69</sup> 4420MB2 *ann 09/13/11*<sup>69</sup> DisplayPort cable is not included; use optional DisplayPort to DisplayPort Monitor Cable (0A36537).More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)**Monitor Accessories<sup>46</sup>**Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*ThinkVision Soundbar 45K1263 *ann 09/16/08*Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*Kensington Twin Head Cable Lock<sup>56</sup> 45K1620 *ann 09/30/08*Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

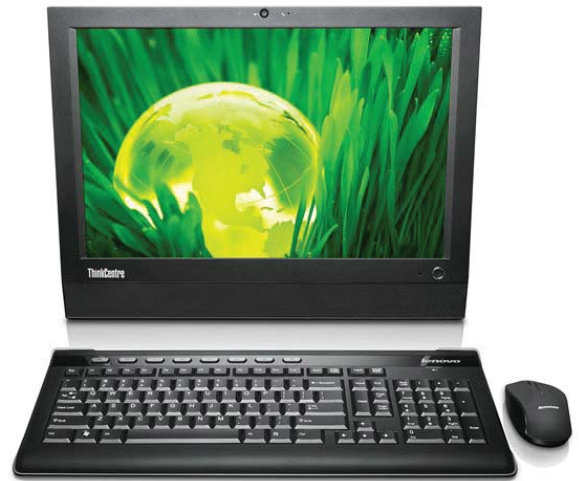
Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre A70z All-In-One  
( Wireless keyboard & mouse  
on selected models only)



Lenovo ThinkCentre A70z All-In-One



Lenovo ThinkCentre A70z All-In-One



Lenovo ThinkCentre A70z All-In-One



ThinkCentre A70z Performance Stand  
57Y4277



ThinkCentre Extend Arm  
57Y4352

Type-model	Processor	GHz	Memory	Widescreen display	Camera (megapixel)	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Keyboard /Mouse	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
1165-A1U	E3200	2.40	1GB	19.0" WXGA+	1.3M	GMA X4500	250GB <sup>2</sup>	DVD±RW		USB	ES50	Prem 32	None	Dec 09
1165-A2U	E5300	2.60	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW		USB	ES50	Pro 32	None	Dec 09
1165-A3U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n <sup>12</sup>	USB	ES50	Pro 32	None	Dec 09

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Best space saving solution & excellent cable management**
- **These models have a 1-year limited warranty<sup>1</sup>**

Positioning Processor	<p><i>All-In-One PC for business customers</i></p> <p><b>Intel® Celeron® Processor E3200</b> with dual-core, 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5300</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache</p> <p>Processor in LGA775 socket</p>		<p><b>All-in-One</b></p> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 18.58" W X 2.87" D X 14.0" H</li> <li>• 472mm W X 73mm D X 356mm H</li> <li>• 17.6 lb (8 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Picture frame style metallic stand (Tilt 10°-35°)</li> </ul>
Implementation			
Memory	<p><b>1GB</b> or <b>2GB</b> std, 4GB max<sup>8</sup>, <b>PC2-6400 800MHz DDR2</b>, non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Non-italics</i>: standard memory in one socket; one socket available</p>		<p>Bay ① 3.5", 1" high, no access, std disk (desktop)</p> <p>Bay ② slim, .5" high, access, std optical (notebook)</p>
Graphics	<p><b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b>, integrated graphics in G41, uses main memory, DirectX® 10</p>		<p><b>Security</b></p> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
SATA disk	<p><b>250GB</b> or <b>320GB</b>, SATA 3.0Gb/s, 3.5" wide, 7200 rpm</p>		
SATA DVD±RW	<p>DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable</p>		
eSATA port	<p>None</p>		
Diskette drive	<p>None</p>		
Media reader	<p>None</p>		
Widescreen display	<p><b>19.0"</b> (482.6mm) <b>WXGA+ (1440x900) TFT color</b>, anti-glare, CCFL backlight, 300 nits, 16:10 aspect ratio, 1000:1 contrast ratio</p>		
Camera	<p><i>Some</i>: camera on top of screen, 1.3-megapixel, fixed focus, integrated microphone (mono), LED indicator</p>		
Chipset	<p><b>Intel G41 Express Chipset</b>; I/O Controller Hub 7 (ICH7)</p>		
Ports	<p><i>Rear</i>: Three USB 2.0, serial (9-pin), ethernet (RJ-45)</p> <p><i>Side</i>: Three USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)</p>		
Mini PCI Express	<p>One Mini PCI Express slot</p> <p><i>Some</i>: 11b/g/n wireless<sup>13</sup>, Mini PCIe adapter, Broadcom® BCM43225</p>		
11b/g/n <sup>12</sup>			
Audio	<p>High Definition (HD) Audio, CONEXANT™ CX20582 codec</p>		
Speaker	<p>Two internal speakers (2 watt x 2)</p>		
IEEE 1394	<p>None</p>		
Ethernet	<p>Gigabit ethernet on planar, Realtek® RTL8111DL</p>		
Intel AMT	<p>None</p>		
Modem	<p>None</p>		
Security chip	<p>None</p>		
Keyboard	<p>Preferred Pro USB Keyboard (USB), 104-key, black, Lenovo® logo</p>		
Mouse	<p>Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo</p>		
Power supply	<p>130 watts, autosensing, 85% PSU</p>		
<b>Preloaded operating system<sup>20</sup></b>	<p><b>Accessories</b></p>		
- <i>Some</i> : Genuine Windows® 7 Home Premium 32	<p>1GB PC2-6400 DDR2 UDIMM 41U2977</p>		
- <i>Some</i> : Genuine Windows 7 Professional 32	<p>2GB PC2-6400 DDR2 UDIMM 41U2978</p> <p>ThinkCentre A70z Performance Stand 57Y4277</p> <p>More accessories on O-A70Z sheet</p>		
<b>Preloaded applications<sup>5</sup></b> (only some listed)	<p>Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a></p> <p>Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a></p>		
• ThinkVantage Product Recovery			
• ThinkVantage System Update			
• ThinkVantage Power Manager			
• ThinkVantage Toolbox			
• Lenovo Online Data Backup			
• Norton™ Internet Security 2009 (30 days of virus definitions)			
• Adobe® Reader®			
• Adobe Flash® Player			
• Skype™ for Windows			
• Microsoft® Office 2007 Trial (60-day)			
• Roxio® Creator® Business Edition (DVD±RW)			
• Roxio MyDVD® (DVD±RW)			
			<p><b>Limited Warranty<sup>1</sup></b></p> <ul style="list-style-type: none"> <li>↪ <b>1-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>1-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5951)</li> <li>• <b>2-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5949)</li> <li>• <b>2-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5952)</li> <li>• <b>3-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5950)</li> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5953)</li> </ul> </li> <li>↪ <b>ThinkPlus services at <a href="http://lenovo.com/thinkplus/warranty">lenovo.com/thinkplus/warranty</a></b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>

See footnotes for important warranty information  
 US models announced November 17, 2009  
 US models withdrawn effective July, 2010

Type-model	Proc-essor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Keyboard /Mouse	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
0401-A2U	E3300	2.50	1GB	19.0" WXGA+		GMA X4500	320GB <sup>2</sup>	DVD±RW		USB	ES50	Prem 32	None	Jun 10
0401-U1U	E3400	2.60	2GB	19.0" WXGA+		GMA X4500	320GB	DVD±RW		USB	ES50	Pro 64	None	Mar 11
0401-A3U	E5500	2.80	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW		USB	ES50	Pro 32	None	Jun 10
0401-D3U	E5500	2.80	3GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n <sup>12</sup>	USB	ES50	Prem 32	None	Jun 10
0401-B6U	E5500	2.80	4GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 32	None	Jun 10
0401-R6U	E5700	3.00	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Dec 10
0401-U2U	E5800	3.20	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB			USB	ES50	Pro 64	None	Mar 11
0401-U6U	E5800	3.20	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW		USB	ES50	Pro 64	None	Mar 11
0401-B7U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 32	None	Jun 10
0401-R7U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Dec 10
0401-R5U	E7500	2.93	2GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Mar 11
0401-A5U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	Wireless	ES50	Pro 64	None	Jun 10
0401-U3U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	500GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Mar 11

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Best space saving solution & excellent cable management**
- **These models have a 1-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning Processor	<i>All-In-One PC for business customers</i> <b>Intel® Celeron® Processor E3300 or E3400 with dual-core,</b> 800MHz system bus, and 1MB L2 cache or <b>Intel Pentium® Processor E5500, E5700, or E5800 with dual-core,</b> 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500 with dual-core,</b> 1066MHz system bus, and 3MB L2 cache Processor in LGA775 socket	<b>All-In-One</b> • Business black color • 18.58" W X 2.87" D X 14.0" H • 472mm W X 73mm D X 356mm H • 17.6 lb (8 kg) in maximum configuration • Handle in rear • Support VESA mount (100mm) • Picture frame style metallic stand (Tilt 10°-35°)
Implementation		
Memory	<b>1GB, 2GB, 3GB, or 4GB</b> std, 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory, DirectX® 10	<b>Security</b> • Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard, mouse • USB port disablement
SATA disk	<b>320GB or 500GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
SATA DVD±RW	<i>Some:</i> DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	
eSATA port	None	
Diskette drive	None	
Media reader	None	
Widescreen display	<b>19.0"</b> (482.6mm) <b>WXGA+ (1440x900) TFT color</b> , anti-glare, CCFL backlight, 300 nits, 16:10 aspect ratio, 1000:1 contrast ratio	
Camera	<i>Some:</i> Camera on top of screen, 1.3-megapixel, fixed focus, integrated microphone (mono), LED indicator	
Chipset	<b>Intel G41 Express Chipset</b> ; I/O Controller Hub 7 (ICH7)	
Ports	<i>Rear:</i> Three USB 2.0, serial (9-pin), ethernet (RJ-45) <i>Side:</i> Three USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Mini PCI Express	One Mini PCI Express slot <i>Some:</i> 11b/g/n wireless <sup>13</sup> , Mini PCIe adapter, Broadcom® BCM43225	Supports ThinkVantage® technologies
Audio	High Definition (HD) Audio, CONEXANT™ CX20582 codec	ENERGY STAR® 5.0-compliant RoHS-compliant
Speaker	Two internal speakers (2 watt x 2)	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL	
Intel AMT	None	
Modem	None	
Security chip	None	<b>Limited Warranty<sup>1</sup></b> ↪ 1-year parts and labor ↪ International Warranty Service <sup>9</sup> ↪ Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts <sup>3</sup> , 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time) ↪ Onsite service upgrade options (in eligible locations): <sup>7</sup> • 1-year LOR 9x5, 4 hour response (ThinkPlus™ part number 45K5951) • 2-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5949) • 2-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5952) • 3-year LOR 9x5, Next Business Day (ThinkPlus part number 45K5950) • 3-year LOR 9x5, 4 hour response (ThinkPlus part number 45K5953) ↪ ThinkPlus services at lenovo.com/thinkplus/warranty ↪ Post warranty maintenance services available ↪ 24 hour x 7 day <sup>14</sup> toll-free support during the warranty period <sup>1</sup> via 800-426-7378
Keyboard	<i>Some:</i> Ultralim Wireless Keyboard (2.4GHz via USB receiver), black <i>Some:</i> Preferred Pro USB Keyboard (USB), 104-key, black, Lenovo® logo	
Mouse	<i>Some:</i> Ultralim Wireless Mouse (2.4GHz via USB receiver), 1000 dpi, black <i>Some:</i> Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	130 watts, autosenesing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® 7 Home Premium 32	2GB PC3-8500 DDR3 UDIMM 45J5435	
- <i>Some:</i> Genuine Windows 7 Professional 32	ThinkCentre A70z Performance Stand 57Y4277	
- <i>Some:</i> Genuine Windows 7 Professional 64	More accessories on O-A70Z sheet	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• Rescue and Recovery™	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• ThinkVantage System Update		
• ThinkVantage Power Manager		
• Norton™ Internet Security 2011 (30-day)		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Corel® Burn.Now™ (DVD±RW)		
• Corel DVD MovieFactory® (DVD±RW)		

See footnotes for important warranty information  
US models announced May 25, 2010, Jun 1, 2010, Nov 30, 2010, Feb 8, 2011, or Mar 8, 2011  
US models withdrawn effective November or December 2011

Type-model	Processor	GHz	Memory	Widescreen display	Camera (mega-pixel)	Integrated graphics	SATA disk	SATA optical	Mini PCIe 802.11 wireless	Keyboard /Mouse	ENERGY STAR 5.0	Win7 preload	Global Educ	Avail date
2565-A6U	E5500	2.80	2GB	19.0" WXGA+	1.3M	GMA X4500	320GB <sup>2</sup>	DVD±RW	11b/g/n <sup>12</sup>	USB	ES50	Pro 32	None	Jun 10
2565-A7U	E7500	2.93	4GB	19.0" WXGA+	1.3M	GMA X4500	320GB	DVD±RW	11b/g/n	USB	ES50	Pro 64	None	Jun 10

- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **Best space saving solution & excellent cable management**
- **These models have a 3-year limited warranty<sup>1</sup>**
- **These systems are Microsoft® Office 2010 Product Key Ready (O10PKR)**

Positioning	<i>All-In-One PC for business customers</i>	
Processor	<b>Intel® Pentium® Processor E5500</b> with dual-core, 800MHz system bus, and 2MB L2 cache or <b>Intel Core™ 2 Duo Processor E7500</b> with dual-core, 1066MHz system bus, and 3MB L2 cache	<b>All-in-One</b>
Implementation	Processor in LGA775 socket	<ul style="list-style-type: none"> <li>• Business black color</li> <li>• 18.58" W X 2.87" D X 14.0" H</li> <li>• 472mm W X 73mm D X 356mm H</li> <li>• 17.6 lb (8 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Picture frame style metallic stand (Tilt 10°-35°)</li> </ul>
Memory	<b>2GB</b> or <b>4GB</b> std, 4GB max <sup>8</sup> , <b>PC3-8500 1066MHz DDR3</b> , non-parity, dual-channel capable, two 240-pin DIMM sockets; <i>Italics:</i> standard memory in both sockets; no sockets available <i>Non-italics:</i> standard memory in one socket; one socket available	Bay ① 3.5", 1" high, no access, std disk (desktop) Bay ② slim, .5" high, access, std optical (notebook)
Graphics	<b>Intel Graphics Media Accelerator X4500 (GMA X4500)</b> , integrated graphics in G41, uses main memory, DirectX® 10	<b>Security</b>
SATA disk	<b>320GB</b> , SATA 3.0Gb/s, 3.5" wide, 7200 rpm	
SATA DVD±RW	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable	<ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard, mouse</li> <li>• USB port disablement</li> </ul>
eSATA port	None	
Diskette drive	None	Supports ThinkVantage® technologies
Media reader	None	ENERGY STAR® 5.0-compliant RoHS-compliant
Widescreen display	<b>19.0"</b> (482.6mm) <b>WXGA+ (1440x900) TFT color</b> , anti-glare, CCFL backlight, 300 nits, 16:10 aspect ratio, 1000:1 contrast ratio	<b>Limited Warranty<sup>1</sup></b>
Camera	Camera on top of screen, 1.3-megapixel, fixed focus, integrated microphone (mono), LED indicator	
Chipset	<b>Intel G41 Express Chipset</b> ; I/O Controller Hub 7 (ICH7)	<ul style="list-style-type: none"> <li>↪ <b>3-year parts and labor</b></li> <li>↪ <b>International Warranty Service<sup>9</sup></b></li> <li>↪ <b>Customer Replaceable Unit (CRU) parts only (with limited onsite service for selected parts<sup>3</sup>, 8 am - 5 pm, Mon - Fri coverage excluding holidays, next business day response time)</b></li> <li>↪ <b>Onsite service upgrade options (in eligible locations):<sup>7</sup></b> <ul style="list-style-type: none"> <li>• <b>3-year LOR 9x5, 4 hour response</b> (ThinkPlus™ part number 45K5955)</li> <li>• <b>3-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5956)</li> <li>• <b>4-year LOR 9x5, Next Business Day</b> (ThinkPlus part number 45K5957)</li> <li>• <b>4-year LOR 9x5, 4 hour response</b> (ThinkPlus part number 45K5958)</li> <li>• <b>4-year LOR 24x7, 4 hour response</b> (ThinkPlus part number 45K5959)</li> </ul> </li> <li>↪ <b>ThinkPlus services at lenovo.com/thinkplus/warranty</b></li> <li>↪ <b>Post warranty maintenance services available</b></li> <li>↪ <b>24 hour x 7 day<sup>14</sup> toll-free support during the warranty period<sup>1</sup> via 800-426-7378</b></li> </ul>
Ports	<i>Rear:</i> Three USB 2.0, serial (9-pin), ethernet (RJ-45) <i>Side:</i> Three USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)	
Mini PCI Express	One Mini PCI Express slot	
11b/g/n <sup>12</sup>	<i>Some:</i> 11b/g/n wireless <sup>13</sup> , Mini PCIe adapter, Broadcom® BCM43225	
Audio	High Definition (HD) Audio, CONEXANT™ CX20582 codec	
Speaker	Two internal speakers (2 watt x 2)	
IEEE 1394	None	
Ethernet	Gigabit ethernet on planar, Realtek® RTL8111DL	
Intel AMT	None	
Modem	None	
Security chip	None	
Keyboard	Preferred Pro USB Keyboard (USB), 104-key, black, Lenovo® logo	
Mouse	Optical Wheel Mouse (USB connector), 400 dpi, black, Lenovo logo	
Power supply	130 watts, autosensing, 85% PSU	
<b>Preloaded operating system<sup>20</sup></b>	<b>Accessories</b>	
- <i>Some:</i> Genuine Windows® 7 Professional 32	2GB PC3-8500 DDR3 UDIMM 45J5435	
- <i>Some:</i> Genuine Windows 7 Professional 64	ThinkCentre A70z Performance Stand 57Y4277	
<b>Preloaded applications<sup>5</sup></b> (all OSes; only some listed)	More accessories on O-A70Z sheet	
• Rescue and Recovery™	Acc Guide in pdf <a href="http://lenovo.com/accessoriesguide">lenovo.com/accessoriesguide</a>	
• ThinkVantage System Update	Other accessories at <a href="http://lenovo.com/accessories">lenovo.com/accessories</a>	
• ThinkVantage Power Manager		
• ThinkVantage Toolbox		
• Norton™ Internet Security 2011 (30 days of virus definitions)		
• Adobe® Reader®		
• Adobe Flash® Player		
• Skype™ for Windows		
• Microsoft Office 2010 preloaded; purchase product key to activate		
• Corel® Burn.Now™ (DVD±RW)		
• Corel DVD MovieFactory® (DVD±RW)		

See footnotes for important warranty information  
 US models announced June 1, 2010  
 US models withdrawn effective November or December 2011

Partial list of accessories supported on ThinkCentre A70z AIO

**Memory**

AIO 1165 use desktop memory:  
2GB PC2-6400 DDR2 UDIMM 41U2978 *ann 01/08/08*

AIO 0401/2565 use desktop memory:  
2GB PC3-8500 DDR3 UDIMM 45J5435 *ann 11/18/08*

More information at  
[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm) 41N3015 *ann 01/24/06*  
500GB SATA 3.0Gb/s Disk (7200 rpm) 43R1990 *ann 11/06/07*

USB 2.0 Portable 320GB Hard Disk 45K1689 *ann 03/17/09*  
USB 2.0 Portable 500GB Hard Disk 45K1690 *ann 05/26/09*  
USB 2.0 Portable Secure 320GB Hard Disk 43R2019 *ann 11/18/08*  
eSATA/USB 2.0 Secure 500GB Hard Drive 57Y4400 *ann 01/07/10*  
Slim USB Portable DVD Burner 0A33988 *ann 06/14/11*

**Keyboard**

Preferred Pro USB Keyboard 73P5220 *ann 06/21/05*  
Enhanced Performance USB Keyboard 73P2620 *ann 03/23/04*  
Ultraslim Plus Wireless Keyboard and Mouse<sup>52</sup> 0A34032 *ann 04/05/11*  
ThinkPad USB Keyboard with TrackPoint 55Y9003 *ann 08/18/09*  
Lenovo® USB Fingerprint Keyboard 73P4730 *ann 02/22/05*  
Lenovo USB Smartcard Keyboard 51J0155 *ann 03/24/09*

<sup>52</sup>Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB) 06P4069 *ann 05/21/03*  
Lenovo ScrollPoint® Mouse (USB, Optical) 31P7405 *ann 08/27/02*  
Lenovo Laser Mouse (USB) 41U3074 *ann 01/23/07*  
Lenovo Wireless Laser Mouse - Black<sup>52</sup> 45K1696 *ann 11/25/08*  
Lenovo Wireless Laser Mouse - Red/Black<sup>52</sup> 51J0198 *ann 11/25/08*

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad® In-Ear Headphones with mic 57Y4488 *ann 01/07/10*

**Security**

Kensington® MicroSaver® Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*  
USB Gemplus GemPC Smart Card Reader 41N3040 *ann 02/21/06*

<sup>56</sup>Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Stand**

ThinkCentre A70z Performance Stand 57Y4277 *ann 11/17/09*  
ThinkCentre Extend Arm 57Y4352 *ann 07/06/10*

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter 45K5296 *ann 05/12/09*  
Kensington MicroSaver Cable Lock<sup>56</sup> 73P2582 *ann 12/29/03*  
Lenovo Security Cable Lock<sup>56</sup> 57Y4303 *ann 08/24/10*

<sup>46</sup>Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)  
Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)  
Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)  
Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)  
An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre Edge 71 Small and  
Lenovo ThinkCentre Edge 71 Tower



Lenovo ThinkCentre Edge 71 Tower  
with dual Lenovo ThinkVision monitors



Lenovo ThinkCentre Edge 71 Small



Lenovo ThinkCentre Edge 71 Small  
with Lenovo ThinkVision monitor



Lenovo ThinkCentre Edge 71 Tower



Lenovo ThinkCentre Edge 71 Tower




# ThinkCentre® Edge 71 Small (1578) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Parallel port	Serial port	Floor stand	Global Educ	Win7 preload
1578-B1U	3x3	Pentium G620	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-B2U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-B4U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	Serial	Stand	N N	Pro 64
1578-H3U	3x3	Core i3-2120	4GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64
1578-G2U	3x3	Celeron G530	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	Media	Parallel	Serial	Stand	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish design, reliability, and productivity for small/medium businesses</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64  <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	Some: 11-in-1 media reader, internal USB 2.0		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Floor Stand	System floor stand for vertical orientation		
Power supply	180 watts, universal, manual switch		
Machine	<ul style="list-style-type: none"> <li>• Glossy black bezel; metal case</li> <li>• 13.1" W X 14.5" D X 3.8" H</li> <li>• 333mm W X 368mm D X 97mm H</li> <li>• 14.3 lb (6.5 kg) in maximum configuration</li> <li>• Ergonomic rubberized handle</li> <li>• Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed		
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1		
			
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		
	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul> RoHS-compliant Supports ThinkVantage Technologies For compatible accessories, please go to O-Edge71 sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced July 5, August 23, or September 6, 2011  
 US models withdrawn effective December 2011 or August 2012


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 (TAIP1-1) August 2012

# ThinkCentre® Edge 71 Small (1578) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	SATA optical	Graphics	Media reader	Parallel port	Serial port	Floor stand	Global Educ	Win7 preload	Ann date (mm/dd/yy)
1578-L4U	3x3	Core i5-2500S	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	Parallel	Serial	Stand	N N	Pro 64	11/08/11
1578-L6U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11
1578-L7U	3x3	Core i3-2130	4GBx1 1333MHz	500G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11
1578-L5U	3x3	Pentium G630	2GBx2 1333MHz	320G 7200	DVD±RW	Intel HD	None	None	None	Stand	N N	Pro 64	11/08/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	Stylish design, reliability, and productivity for small/medium businesses										<b>Preloaded operating system</b>		
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										Genuine Windows® 7 Professional 64		
Implementation	Processor in LGA1155 socket										<b>Preloaded applications<sup>20</sup></b> (only some listed)		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets										<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display												
Disk	SATA 3.0Gb/s 7200 rpm												
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive												
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset												
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar												
eSATA port	None												
Media reader	None												
Chipset	<b>Intel H61 Express Chipset</b>												
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)												
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D												
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)												
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)												
Audio	High Definition (HD) Audio, Realtek® ALC662 codec												
Speaker	Internal speaker for business audio												
IEEE 1394	None												
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®												
Intel AMT	None												
Modem	None												
Security chip	None												
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo												
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo												
Floor Stand	System floor stand for vertical orientation												
Power supply	180 watts, universal, manual switch												
Machine	<ul style="list-style-type: none"> <li>• Glossy black bezel; metal case</li> <li>• 13.1" W X 14.5" D X 3.8" H</li> <li>• 333mm W X 368mm D X 97mm H</li> <li>• 14.3 lb (6.5 kg) in maximum configuration</li> <li>• Ergonomic rubberized handle</li> <li>• Highlighted optical drive button for easy access</li> </ul>												
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 3.5", 1" high, no access, std disk Bay 3: 1.5", .35" high, access, opt reader* *bay only available on models with media reader installed										<b>Security</b>		
Slot	Slot 1: Low Profile, PCI Express® 2.0 x16 (45w max) Slot 2: Low Profile, PCIe 2.0 x1 Slot 3: Low Profile, PCIe 2.0 x1										<ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:               <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>		
											RoHS-compliant		
											Supports ThinkVantage Technologies		
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available										For compatible accessories, please go to O-Edge71 sheet; For Lenovo service upgrade options, please go to S-TC sheet		

See footnotes for important warranty information  
 US models announced November 8, 2011  
 US models withdrawn effective December 2011 or August 2012

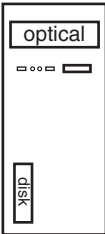
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 (TAIP1-3) August 2012

# ThinkCentre® Edge 71 Tower (1577) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Parallel port	Serial port	Global Educ	Win7 preload
1577-B4U	3x3	Pentium G620	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
1577-B5U	3x3	Core i3-2100	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
1577-B9U	3x3	Pentium G620	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	Serial	N N	Pro 64
1577-K8U	3x3	Core i3-2120	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64
1577-J7U	3x3	Celeron G530	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish design, reliability, and productivity for small/medium businesses</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Live</li> <li>• Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Celeron® G530 Processor (2 cores / 2 threads, 2.4GHz, 2MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Pentium® G620 Processor (2 cores / 2 threads, 2.6GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	180 watts, universal, manual switch		
Machine	<ul style="list-style-type: none"> <li>• Glossy black bezel; metal case</li> <li>• 6.3" W X 14.0" D X 15.4" H</li> <li>• 160mm W X 355mm D X 392mm H</li> <li>• 15.4 lb (7.0 kg) in maximum configuration</li> <li>• Ergonomic rubberized handle</li> <li>• Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed		
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (45w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1		
			
	<b>Security</b> <ul style="list-style-type: none"> <li>• One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>• Power-on password</li> <li>• Administrator password</li> <li>• Hard disk password</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• Individual USB port disablement</li> </ul>		
	RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-Edge71 sheet; For Lenovo service upgrade options, please go to S-TC sheet		
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information  
 US models announced July 5, August 23, or September 6, 2011  
 US models withdrawn effective December 2011 or August 2012

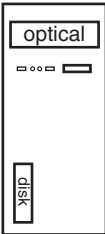
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 (TAIP1-2) August 2012

# ThinkCentre® Edge 71 Tower (1577) - TopSeller - II - withdrawn

Personal Systems Reference (PSREF)

Type-model	Slot x bay	Processor	Memory <sup>a</sup>	SATA disk GB rpm	2nd Disk Bay	SATA optical	Graphics	Media reader	Parallel port	Serial port	Global Educ	Win7 preload	Ann date (mm/dd/yy)
1577-M5U	3x3	Core i5-2500S	4GBx1 1333MHz	500G 7200	None	DVD±RW	Intel HD	None	Parallel	Serial	N N	Pro 64	11/08/11
1577-M6U	3x3	Pentium G630	2GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	None	N N	Pro 64	11/08/11
1577-M7U	3x3	Core i3-2130	4GBx1 1333MHz	320G 7200	None	DVD±RW	Intel HD	None	None	None	N N	Pro 64	11/08/11

- These small and medium business (SMB) models are part of the US TopSeller™ Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish design, reliability, and productivity for small/medium businesses</i>		<b>Preloaded operating system</b> Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed) <ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Live</li> <li>● Microsoft Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> </ul>
Processor	<b>Intel® Pentium® G630 Processor (2 cores / 2 threads, 2.7GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1066MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2130 Processor (2 cores / 4 threads, 3.4GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller		
Implementation	Processor in LGA1155 socket		
Memory	8GB max, <b>UDIMM, PC3-10600 1333MHz DDR3</b> , two 240-pin DIMM sockets		
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, one VGA, one DVI-D, supports dual independent display		
Disk	SATA 3.0Gb/s 7200 rpm		
Optical	Super Multi-Burner DL DVD±RW SATA 1.5Gb/s Drive		
SATA controller	Serial ATA, SATA 3.0Gb/s, integrated in chipset		
SATA cables	Two SATA cables (each 1-drop to device), three SATA 3.0Gb/s connectors on planar		
eSATA port	None		
Media reader	None		
Chipset	<b>Intel H61 Express Chipset</b>		
Front ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)		
Rear ports	Four USB 2.0, optional serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), VGA DB-15, DVI-D		
Rear audio ports	Line-in (stereo, 3.5mm), line-out (stereo, 3.5mm), microphone (stereo, 3.5mm)		
Internal connector	Three USB 2.0 planar conn (1 used; two open for additional USB devices)		
Audio	High Definition (HD) Audio, Realtek® ALC662 codec		
Speaker	Internal speaker for business audio		
IEEE 1394	None		
Ethernet	Gigabit ethernet port, Realtek RTL8111E, Wake on LAN®		
Intel AMT	None		
Modem	None		
Security chip	None		
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo		
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo		
Power supply	180 watts, universal, manual switch		
Machine	<ul style="list-style-type: none"> <li>● Glossy black bezel; metal case</li> <li>● 6.3" W X 14.0" D X 15.4" H</li> <li>● 160mm W X 355mm D X 392mm H</li> <li>● 15.4 lb (7.0 kg) in maximum configuration</li> <li>● Ergonomic rubberized handle</li> <li>● Highlighted optical drive button for easy access</li> </ul>		
Bay	Bay 1: 5.25", 1.6" high, access, std optical Bay 2: 1.5", .35" high, access, opt reader* Bay 3: 3.5", 1" high, no access, std disk *bay only available on models with media reader installed		
Slot	Slot 1: half-length, full-height, PCI Express® 2.0 x16 (45w max) Slot 2: half-length, full-height, PCIe 2.0 x1 Slot 3: half-length, full-height, PCIe 2.0 x1		
			
	<b>Security</b> <ul style="list-style-type: none"> <li>● One lock to secure both cover and entire system to fixed object:                             <ul style="list-style-type: none"> <li>-Padlock loop (in rear for opt padlock)</li> <li>-Security slot (in rear for optional Kensington® MicroSaver® cable)</li> </ul> </li> <li>● Power-on password</li> <li>● Administrator password</li> <li>● Hard disk password</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● Individual USB port disablement</li> </ul>		
	RoHS-compliant		
	Supports ThinkVantage Technologies		
	For compatible accessories, please go to O-Edge71 sheet; For Lenovo service upgrade options, please go to S-TC sheet		
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available		

See footnotes for important warranty information  
 US models announced November 8, 2011  
 US models withdrawn effective December 2011 or August 2012

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**Memory**

2GB PC3-10600 DDR3 Low-Halogen UDIMM	57Y4390	ann 01/12/10
2GB PC3-10600 DDR3 L-H UDIMM (25-Pack)	57Y4420	ann 01/12/10
4GB PC3-10600 DDR3 UDIMM	0A36527	ann 04/12/11

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Optical**

DVD-ROM DL SATA 1.5Gb/s 16X-48X Max <sup>4</sup>	41N5618	ann 09/26/06
Lenovo® Super Multi-Burner SATA Drive	0A65618	ann 08/23/11

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08

USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Graphics**

*Small 1578 support Low Profile:*

NVIDIA® Quadro® 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59 (2-DVI or 2-VGA via DMS59 dongles)	0A36528	ann 04/26/11
NVIDIA GeForce® 310 512MB DMS59 (2-DVI or 2-VGA via DMS59 dongles)	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I with a DVI to VGA converter)	0A36538	ann 05/29/12

*Tower 1577 support:*

NVIDIA Quadro 256MB NVS 295 (2-DP)	45K1669	ann 04/21/09
NVIDIA Quadro 512MB NVS 300 DMS59	0A36528	ann 04/26/11
NVIDIA GeForce 310 512MB DMS59	57Y4167	ann 03/02/10
AMD 7450 1GB (DP, DVI-I)	0A36538	ann 05/29/12

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
UltraSlim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 <sup>52</sup>	57Y6336	ann 12/08/09
ThinkPad USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09
Lenovo Cherry Smartcard Keyboard	0A36328	

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo ScrollPoint® Mouse(USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic <sup>60</sup>	57Y4488	ann 01/07/10
Lenovo Mini Speakers M220	55Y2033	ann 01/07/10
Lenovo Speaker M0520 (black)	57Y6360	ann 02/08/11
Lenovo Speaker M0520 (red)	57Y6361	ann 02/08/11
Lenovo Headphone P550	55Y2065	

<sup>60</sup> Has a 1.2 meter (3.9-foot) cable. Best when systems are in close proximity. Example: SFF placed on a desk.

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Monitors**

ThinkVision® L1711p 17" (VGA, DVI-D)	5047HB2	ann 10/20/09
ThinkVision L1900p 19" (VGA, DVI-D)	4431HE1	ann 11/11/08
ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D)	2448MB6	ann 09/13/11
ThinkVision L2250p Wide 22" (VGA, DVI-D)	2572HB6	ann 10/20/09
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09
ThinkVision LT2252p Wide 22" (VGA, DP, DVI-D)	2572MB6	ann 09/13/11
ThinkVision LT2452p Wide 24" (VGA, DP, DVI-D)	4420MB2	ann 09/13/11

More information at [www.lenovo.com/support/monitors](http://www.lenovo.com/support/monitors)

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
ThinkCentre Extend Arm	57Y4352	ann 07/06/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems



Lenovo ThinkCentre Edge 91z All-In-One  
(Wireless Keyboard & mouse on selected models only)



Lenovo ThinkCentre Edge 91z All-In-One



Lenovo ThinkCentre Edge 91z All-In-One



Handle



Lenovo ThinkCentre Edge 91z All-In-One



Lenovo ThinkCentre Edge 91z with Stand  
(ThinkCentre Edge 91z Stand 0A33969)

# ThinkCentre® Edge 91z (7075) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>8</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Global	Win7 preload
7075-G1U	i3-2100	2GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Prem 64
7075-H1U	i3-2100	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	None	Frame	Edge USB	None	Pro 64
7075-G4U	i5-2400S	4GBx1	21.5" Full HD	2.0M	500G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-G8U	i7-2600S	4GBx2	21.5" Full HD	2.0M	1TB 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-L1U	i3-2120	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64
7075-L2U	G850	4GBx1	21.5" Full HD	2.0M	320G 7200	None	DVD±RW	Intel HD	Intel 1000	Media	Frame	Edge USB	None	Pro 64

- **Best space saving solution & excellent cable management**
- **These small and medium business (SMB) models are part of the US TopSeller™ Program**
- **These models have a 1-year limited warranty**
- **These systems are Microsoft Office 2010 Product Key Ready (O10PKR)**

Positioning	<i>Stylish All-In-One PC for small/medium businesses</i>										<b>Preloaded operating system</b>			
Processor	<b>Intel® Pentium® G850 Processor (2 cores / 2 threads, 2.9GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i3-2120 Processor (2 cores / 4 threads, 3.3GHz, 3MB cache)</b> , Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache)</b> , Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller										Some: Genuine Windows® 7 Professional 64 Some: Genuine Windows 7 Home Premium 64  <b>Preloaded applications<sup>20</sup></b> (only some listed)			
Implementation	Processor in LGA1155 socket										<ul style="list-style-type: none"> <li>• Rescue and Recovery™</li> <li>• ThinkVantage® System Update</li> <li>• ThinkVantage Power Manager</li> <li>• ThinkVantage Toolbox</li> <li>• Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>• Adobe Reader®</li> <li>• Skype™ for Windows</li> <li>• Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>• Corel® Burn.Now™ (DVD±RW)</li> <li>• Corel DVD MovieFactory® (DVD±RW)</li> <li>• Corel WinDVD (DVD±RW)</li> </ul>			
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>Intel HD Graphics</b> in processor, uses main memory, HDCP, DirectX® 10.1, external digital monitor support via HDMI, supports dual independent display													
Widescreen display	<b>21.5"</b> (545.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector													
Multi-touch	None													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator													
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in													
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm													
mSATA™ SSD	None													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	Some: 7-in-1 media reader, internal USB 2.0													
Chipset	<b>Intel B65 Express Chipset</b>													
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	Two PCI Express® Mini Card slots													
PCIe WLAN	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2													
Bluetooth	None													
Ethernet	One gigabit ethernet port, Intel 82579LM													
Audio	High Definition (HD) Audio, Realtek® ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	None													
Keyboard	Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo													
Mouse	Enhanced Optical USB Mouse, 1000 dpi, black, Lenovo logo													
Power supply	150 watts, autosensing, 85% PSU													
Machine	<b>Model(s) with Frame stand:</b> <ul style="list-style-type: none"> <li>• Business black color</li> <li>• 21.5" W X 3.2" D X 16.3" H</li> <li>• 545mm W X 81mm D X 414mm H (with feet)</li> <li>• 18.5 lb (8.4 kg) in maximum configuration</li> <li>• Handle in rear</li> <li>• Support VESA mount (100mm)</li> <li>• Removable feet</li> </ul>										<b>Security</b> <ul style="list-style-type: none"> <li>• Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>• Boot sequence control</li> <li>• Boot without keyboard and mouse</li> <li>• USB port disablement</li> </ul> Climate Saver-compliant ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant  Supports ThinkVantage Technologies			
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available  For compatible accessories, please go to O-Edge91Z sheet; For Lenovo service upgrade options, please go to S-TC sheet													

See footnotes for important warranty information

US models announced May 17, May 21, May 24, June 7, or Nov 8, 2011

US models withdrawn effective November, 2011, December 2011, or August 2012

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(TAHO1-1) August 2012

# ThinkCentre® Edge 91z (7074) - TopSeller - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>a</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Win7 Global preload	Ann date (mm/dd/yy)
7074-E6U	i3-2100	4GBx1	21.5" Full HD	2.0M	250G 7200	None	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Edge USB	None Pro 64	12/13/11
7074-F5U	i5-2400S	4GBx1	21.5" Full HD	2.0M	500G 7200	None	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Wireless	None Pro 64	02/21/12

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish All-In-One PC for small/medium businesses</i>											<b>Preloaded operating system</b>		
Processor	<b>Intel® Core™ i3-2100 Processor (2 cores / 4 threads, 3.1GHz, 3MB cache),</b> Virtualization Technology, integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket											Genuine Windows® 7 Professional 64 <b>Preloaded applications<sup>20</sup></b> (only some listed)		
Implementation												<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● Password Manager</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW, Blu-ray™)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> <li>● Corel WinDVD (DVD, DVD±RW, Blu-ray)</li> <li>● Ulead DVD MovieFactory (Blu-ray model(s) only)</li> </ul>		
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>AMD Radeon™ HD 6650A</b> , 1GB memory, DirectX® 11, PowerPlay™ technology, external digital monitor support via HDMI, supports dual independent display													
Widescreen display	<b>21.5"</b> (545.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector													
Multi-touch	None													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator													
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in													
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm													
mSATA™ SSD	None													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
eSATA port	None													
Media reader	7-in-1 media reader, internal USB 2.0													
Chipset	<b>Intel B65 Express Chipset</b>													
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	Two PCI Express® Mini Card slots													
PCIe WLAN	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2													
Bluetooth	None													
Ethernet	One gigabit ethernet port, Intel 82579LM													
Audio	High Definition (HD) Audio, Realtek® ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	None													
Keyboard	<i>Some:</i> Lenovo® Slim USB Keyboard (USB connector), black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black <i>Some:</i> Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black											<b>Security</b> <ul style="list-style-type: none"> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● USB port disablement</li> </ul> Climate Saver-compliant ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies		
Mouse														
Power supply	180 watts, autosensing, 92% PSU													
Machine	<i>Model(s) with Frame stand:</i> <ul style="list-style-type: none"> <li>● Business black color</li> <li>● 21.5" W X 3.2" D X 16.3" H</li> <li>● 545mm W X 81mm D X 414mm H (with feet)</li> <li>● 18.5 lb (8.4 kg) in maximum configuration</li> <li>● Handle in rear</li> <li>● Support VESA mount (100mm)</li> <li>● Removable feet</li> </ul>													
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available													

See footnotes for important warranty information  
 US models announced December 13, 2011 or February 21, 2012  
 US models withdrawn effective August 2012

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 (TAHO1-4) August 2012



# ThinkCentre® Edge 91z (1736) - Multi-touch (TopS) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>6</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Global	Win7 preload
1736-A6U	i5-2400S	2GBx1	21.5" Full HD	2.0M	500G 7200	None	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Edge USB	None	Pro 32
1736-A7U	i7-2600S	4GBx1	21.5" Full HD	2.0M	500G 7200	None	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Wireless	None	Pro 32

- Best space saving solution & excellent cable management
- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 3-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish All-In-One PC for small/medium businesses</i>										<b>Preloaded operating system</b>			
Processor	<b>Intel® Core™ i5-2400S Processor (4 cores / 4 threads, 2.5GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.3GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller <b>Intel Core i7-2600S Processor (4 cores / 8 threads, 2.8GHz, 8MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.8GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller Processor in LGA1155 socket										Genuine Windows® 7 Professional 32 <b>Preloaded applications<sup>20</sup></b> (only some listed)			
Implementation	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)										<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● Password Manager</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW, Blu-ray™)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> <li>● Corel WinDVD (DVD, DVD±RW, Blu-ray)</li> <li>● Ulead DVD MovieFactory (Blu-ray model(s) only)</li> </ul>			
Memory	8GB max <sup>7</sup> , <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)													
Graphics	<b>AMD Radeon™ HD 6650A</b> , 1GB memory, DirectX® 11, PowerPlay™ technology, external digital monitor support via HDMI™, supports dual independent display													
Display	<b>21.5"</b> (545.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector													
Multi-touch	Supports Multi-touch function													
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator													
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in													
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm													
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable													
mSATA™ SSD	None													
eSATA port	None													
Media reader	7-in-1 media reader, internal USB 2.0													
Chipset	<b>Intel B65 Express Chipset</b>													
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector													
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)													
PCIe Mini Card	Two PCI Express® Mini Card slots													
PCIe WLAN <sup>4</sup>	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2													
Bluetooth™	None													
Ethernet	One gigabit ethernet port, Intel 82579LM													
Audio	High Definition (HD) Audio, Realtek® ALC269Q													
Speaker	Two internal stereo speakers (2x2w) with amplifier													
Intel AMT	None													
Modem	None													
IEEE 1394	None													
Security chip	None													
Keyboard	<i>Some:</i> Preferred Pro USB Keyboard (USB connector), 104-key, black, Lenovo® logo <i>Some:</i> Ultralim Plus Wireless Keyboard (2.4GHz via USB receiver), black <i>Some:</i> Enhanced Optical USB Mouse, 1000dpi, black, Lenovo logo <i>Some:</i> Ultralim Plus Wireless Mouse (2.4GHz via USB receiver), black										<b>Security</b> <ul style="list-style-type: none"> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● USB port disablement</li> </ul>			
Mouse														
Power supply	180 watts AC adapter, autosensing, 92% PSU													
Machine	<i>Model(s) with Frame stand:</i> <ul style="list-style-type: none"> <li>● Business black color</li> <li>● 21.5" W X 3.2" D X 16.3" H</li> <li>● 545mm W X 81mm D X 414mm H (with feet)</li> <li>● 18.5 lb (8.4 kg) in maximum configuration</li> <li>● Handle in rear</li> <li>● Support VESA mount (100mm)</li> <li>● Removable feet</li> </ul>										Climate Saver-compliant ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant Supports ThinkVantage Technologies			
Limited Warranty <sup>12</sup>	<b>3-years, limited onsite service<sup>24</sup></b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades <sup>22</sup> available										For compatible accessories, please go to O-Edge91Z sheet; For ThinkPlus™ service upgrade options, please go to S-TC sheet			

See footnotes for important warranty information  
 US models announced September 6, 2011  
 US models withdrawn effective December 2011

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 (TAHO1-2) December 2011

# ThinkCentre® Edge 91z (1732) - Multi-touch (TopSeller) - withdrawn

Personal Systems Reference (PSREF)

Type-model	Processor	Memory <sup>a</sup>	Widescreen display	Camera (mega-pixel)	Disk SATA GB	SATA rpm	mSATA SSD	SATA optical	Graphics	PCIe Mini Card WLAN	Media reader	Stand type	Keyboard /Mouse	Win7 Global preload	Ann date (mm/dd/yy)	
1732-B3U	i5-2500S	4GBx1	21.5" Full HD	2.0M	500G	7200	80GB	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Wireless	None	Pro 64	12/13/11
1732-B4U	i5-2500S	4GBx1	21.5" Full HD	2.0M	500G	7200	None	DVD±RW	HD 6650A	Intel 1000	Media	Frame	Wireless	None	Pro 64	12/13/11

- These small and medium business (SMB) models are part of the US TopSeller Program
- These models have a 1-year limited warranty
- These systems are Microsoft Office 2010 Product Key Ready (O10PKR)

Positioning	<i>Stylish All-In-One PC for small/medium businesses</i>											<b>Preloaded operating system</b>
Processor	<b>Intel® Core™ i5-2500S Processor (4 cores / 4 threads, 2.7GHz, 6MB cache),</b> Virtualization Technology, Turbo Boost 2.0 (3.7GHz), integrated Intel HD Graphics, integrated 1333MHz dual-channel DDR3 memory controller											Genuine Windows® 7 Professional 64
Implementation	Processor in LGA1155 socket											<b>Preloaded applications<sup>20</sup></b> (only some listed)
Memory	8GB max, <b>PC3-10600 1333MHz DDR3</b> , two 204-pin SODIMM sockets (notebook)											<ul style="list-style-type: none"> <li>● Rescue and Recovery™</li> <li>● Password Manager</li> <li>● ThinkVantage® System Update</li> <li>● ThinkVantage Power Manager</li> <li>● ThinkVantage Toolbox</li> <li>● Norton™ Internet Security 2011 (30 days of virus definitions)</li> <li>● Adobe Reader®</li> <li>● Skype™ for Windows</li> <li>● Microsoft® Office 2010 preloaded; purchase product key to activate</li> <li>● Corel® Burn.Now™ (DVD±RW, Blu-ray™)</li> <li>● Corel DVD MovieFactory® (DVD±RW)</li> <li>● Corel WinDVD (DVD, DVD±RW, Blu-ray)</li> <li>● Ulead DVD MovieFactory (Blu-ray model(s) only)</li> </ul>
Graphics	<b>AMD Radeon™ HD 6650A</b> , 1GB memory, DirectX® 11, PowerPlay™ technology, external digital monitor support via HDMI, supports dual independent display											
Widescreen display	<b>21.5"</b> (545.2mm) <b>Full HD 1080p (1920x1080) TFT color</b> , infinity display, LED backlight, 250 nits, 16:9 aspect ratio, 1000:1 contrast ratio; works as standalone monitor via VGA-in connector											
Multi-touch	Supports Multi-touch function											
Camera	Camera on top of screen, 2.0-megapixel, fixed focus, integrated digital MIC array with stereo, LED indicator											
Controls	Front facing buttons for brightness up/auto, brightness down, power on/off, and Video in											
Disk	SATA 6.0Gb/s, 3.5" Wide, 7200 rpm											
mSATA™ SSD	<i>Some:</i> 80GB mSATA Solid State Drive (SSD), via PCIe Mini Card slot											
Optical	DVD burner, SATA 1.5Gb/s, 12.7mm high, fixed, not removable											
eSATA port	None											
Media reader	7-in-1 media reader, internal USB 2.0											
Chipset	<b>Intel B65 Express Chipset</b>											
Rear ports	Four USB 2.0, ethernet (RJ-45), HDMI, VGA-in connector											
Side ports	Two USB 2.0, microphone (stereo, 3.5mm), headphone (stereo, 3.5mm)											
PCIe Mini Card	Two PCI Express® Mini Card slots											
PCIe WLAN	11b/g/n wireless, Mini PCIe adapter, Intel Condor Peak 1000, 1x2											
Bluetooth	None											
Ethernet	One gigabit ethernet port, Intel 82579LM											
Audio	High Definition (HD) Audio, Realtek® ALC269Q											
Speaker	Two internal stereo speakers (2x2w) with amplifier											
Intel AMT	None											
Modem	None											
IEEE 1394	None											
Security chip	None											
Keyboard	Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black											
Mouse	Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black											
Power supply	180 watts, autosensing, 92% PSU											
Machine	<i>Model(s) with Frame stand:</i>											<b>Security</b>
	<ul style="list-style-type: none"> <li>● Business black color</li> <li>● 21.5" W X 3.2" D X 16.3" H</li> <li>● 545mm W X 81mm D X 414mm H (with feet)</li> <li>● 18.5 lb (8.4 kg) in maximum configuration</li> <li>● Handle in rear</li> <li>● Support VESA mount (100mm)</li> <li>● Removable feet</li> </ul>											<ul style="list-style-type: none"> <li>● Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Kensington lock also locks chassis)</li> <li>● Boot sequence control</li> <li>● Boot without keyboard and mouse</li> <li>● USB port disablement</li> </ul>
												Climate Saver-compliant ENERGY STAR® 5.0-compliant GREENGUARD® certified RoHS-compliant
												Supports ThinkVantage Technologies
Limited Warranty <sup>1</sup>	<b>1-year, limited onsite service</b> , 8 am-5 pm, Mon - Fri coverage excluding holidays, next business day response time / service upgrades available											For compatible accessories, please go to O-Edge91Z sheet; For Lenovo service upgrade options, please go to S-TC sheet

See footnotes for important warranty information  
 US models announced December 13, 2011  
 US models withdrawn effective August 2012

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**Memory**

2GB PC3-10600 DDR3 SODIMM	55Y3710	ann 03/02/10
2GB PC3-10600 DDR3 SODIMM (25Pack)	57Y4416	ann 03/02/10
4GB PC3-10600 DDR3 SODIMM	55Y3711	ann 03/02/10

More information at

[www.lenovo.com/support/desktopmemorycompatibility](http://www.lenovo.com/support/desktopmemorycompatibility)

**Storage and removable storage**

250GB SATA 3.0Gb/s Disk (7200 rpm)	41N3015	ann 01/24/06
500GB SATA 3.0Gb/s Disk (7200 rpm)	43R1990	ann 11/06/07
1TB SATA 3.0Gb/s Disk (7200 rpm)	45J7918	ann 08/19/08
USB 2.0 Portable 320GB Hard Disk	45K1689	ann 03/17/09
USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
USB 2.0 Portable Secure 320GB Hard Disk	43R2019	ann 11/18/08
USB 3.0 Secure 500GB Hard Drive	0A65619	ann 11/29/11
USB 3.0 Secure 750GB Hard Drive	0A65616	ann 11/29/11
Slim USB Portable DVD Burner	0A33988	ann 06/14/11

**Keyboard**

Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
USB Numeric Keypad	33L3225	ann 05/01/00
Ultraslim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
Lenovo Mini Wireless Keyboard N5901 <sup>52</sup>	57Y6336	
ThinkPad® USB Keyboard with TrackPoint	55Y9003	ann 08/18/09
Lenovo® USB Fingerprint Keyboard	73P4730	ann 02/22/05
Lenovo USB Smartcard Keyboard	51J0155	ann 03/24/09

<sup>52</sup> Wireless via 2.4GHz technology using a micro-size USB receiver.

More information at [www.lenovo.com/support/keyboards](http://www.lenovo.com/support/keyboards)

**Mouse**

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
ThinkPad USB Laser Mouse	57Y4635	ann 12/15/09
Lenovo ScrollPoint® Mouse (USB, Optical)	31P7405	ann 08/27/02
ThinkPad Travel Mouse (USB, Optical)	31P7410	ann 06/04/02
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
Lenovo Mini Optical Mouse - Black	55Y9308	ann 05/19/09
Lenovo Mini Optical Mouse - White	55Y9309	ann 05/19/09
Lenovo Optical Mouse A6010	57Y6255	
Lenovo Mini Optical Mouse M20B	55Y2091	
Lenovo Wireless Mouse N30B	55Y9360	
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11

More information at [www.lenovo.com/support/mice](http://www.lenovo.com/support/mice)

**Multimedia**

ThinkPad In-Ear Headphones with mic	57Y4488	ann 01/07/10
Lenovo Mini Speaker M220	55Y2033	ann 01/07/10
Lenovo Headphone P550	55Y2065	

**Security**

Kensington® MicroSaver® Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10
USB Gemplus GemPC Smart Card Reader	41N3040	ann 02/21/06

<sup>56</sup> Attaching to any form factor not only secures the ThinkCentre to the work area, but it also prevents users from opening the chassis itself.

**Stand**

ThinkCentre Edge 91z Stand <sup>59</sup>	0A33969	ann 07/26/11
ThinkCentre Extend Arm <sup>57</sup>	57Y4352	ann 07/06/10

<sup>57</sup> Compatible when ThinkCentre Extend Arm is desk (clamp) mounted only, wall mount is not supported.

<sup>59</sup> Not compatible to Multi-touch models.

**Monitor Accessories<sup>46</sup>**

Lenovo USB-to-DVI Monitor Adapter	45K5296	ann 05/12/09
Kensington MicroSaver Cable Lock <sup>56</sup>	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock <sup>56</sup>	45K1620	ann 09/30/08
Lenovo Security Cable Lock <sup>56</sup>	57Y4303	ann 08/24/10

<sup>46</sup> Compatible on selected Lenovo and ThinkVision monitors.

More information at [www.lenovo.com/support/monitoraccessories](http://www.lenovo.com/support/monitoraccessories)

For more information on accessories:

[www.lenovo.com/accessories](http://www.lenovo.com/accessories)

Purchase Lenovo accessories

[www.lenovo.com/support/accessories](http://www.lenovo.com/support/accessories)

Product specifications on Lenovo Support

[www.lenovo.com/accessoriesguide](http://www.lenovo.com/accessoriesguide)

Option Compatibility Matrix (OCM) and accessory brochures

[www.lenovoquickpick.com](http://www.lenovoquickpick.com)

An Options Compatibility Configurator for Lenovo systems

- Availability:** All offers subject to availability. Lenovo reserves the right to alter product offerings and specifications at any time, without notice. Lenovo is not responsible for photographic or typographic errors.
- Warranty:** For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept ZPYA/B676. Lenovo makes no representation or warranty regarding third party products or services.
- <sup>1</sup> **Limited warranty:** Support unrelated to a warranty issue may be subject to additional charges.
  - <sup>2</sup> **Hard drive:** GB = billion bytes, TB = trillion bytes. Accessible capacity is less; up to 4GB is service partition.
  - <sup>3</sup> **Limited onsite service systems** are designed to be repaired during the applicable warranty period primarily with customer-replaceable parts provided by Lenovo. Lenovo will only send a technician onsite to perform a repair if (a) remote telephone diagnosis and/or customer part replacement are unable to resolve the problem, or (b) the part is one of the few designated by Lenovo for onsite replacement. For a list of onsite replaceable parts, contact Lenovo. In the United States call 1-800-426-7378. Support unrelated to a warranty issue may be subject to additional charges. Lenovo onsite repair (LOR), 8 am to 5 pm, Monday through Friday coverage excluding holidays, next business day (NBD) response time.
  - <sup>4</sup> **CD and DVD list** maximum rates; rates are variable and are often less than the maximum.
  - <sup>5</sup> **Included software** may differ from its retail version (if available), and may not include user manuals or all program functionality. License agreements may apply.
  - <sup>6</sup> **Multi-Burner Plus** (part number 73P3305 or 73P3370) is a DVD±RW device that reads and writes to DVD-RAM, DVD-R, DVD-RW, DVD+R, and DVD+RW. It also reads and writes to CD-R and CD-RW media. 73P3370 also writes to DVD+R double layer media.
  - <sup>7</sup> **ThinkPlus Services:** These services are available for machines normally used for business, professional, or trade purposes, rather than personal, family, or household purposes. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees. If the machine problem turns out to be a Customer Replaceable Unit (CRU), a part will be express shipped to you for quick replacement. Onsite 24x7x2-hour service is not available in all locations. P&L means parts and labor. P/U means pick-up. See ThinkPlus terms and conditions for complete details and restrictions.
  - <sup>8</sup> **Memory:** For PCs without a separate graphics card, memory supports both system and video. Accessible system memory may be up to 384MB less than the amount stated, depending on video mode.
  - <sup>9</sup> **International Warranty Service** is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
  - <sup>10</sup> **Modem speeds:** Public network download speeds are limited to 53Kbps. Upload speeds are limited to 48Kbps for V.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Check with your telephone and ISP service providers for availability.
  - <sup>11</sup> **For combination drives**, maximum speeds only are given in the following order: CD read, CD write, CD re-write, DVD read.
  - <sup>14</sup> **Response times may vary.** May exclude some holidays. Telephone support may be subject to additional charges.
  - <sup>15</sup> **Update Connector** is available at no charge to registered customers during the limited warranty period. Line charges may apply.
  - <sup>16</sup> **Embedded Security Subsystem** works with optional VPN software.

- <sup>18</sup> **Embedded Security Subsystem** may require download of client security software from the Web.
- <sup>19</sup> **Asset ID** allows system-specific information to be stored in a chip inside the system; it does not have any radio frequency support.
- <sup>20</sup> **Operating System:** Level of support varies by operating system. Operating systems not preloaded on the system may not provide full feature functionality. Refer to [lenovo.com/pc/support](http://lenovo.com/pc/support) and enter your machine type and model number for more information.

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