



Lenovo® ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet



Lenovo ThinkPad X230 Tablet

# ThinkPad X230 Tablet (3435) - TopSeller

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>9</sup> rpm	Optical in UltraBase	ThinkPad Backlit Ultrabase Series 3	key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-Blue-tery Intel vPro	Pre-load	Ann date (mm/yy)
3435-2YU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205 <sup>28</sup>	Gobi	select BT 6 vPro	Pro 64	06/12
3435-2XU	i7-3520M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	Gobi	select BT 6 vPro	Pro 64	06/12
3435-2WU	i7-3520M	4GBx2	12.5" HD Multi	720p	180G SSD	Optional	Opt	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2VU	i7-3520M	4GBx1	12.5" HD Multi	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2UU	i7-3520M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2TU	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2SU	i7-3520M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2RU	i5-3320M	4GBx1	12.5" HD Multi	720p	128G SSD	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12
3435-2KU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205	upg	None BT 6 vPro	Pro 64	06/12

- Small and medium business (SMB) model(s), part of the US TopSeller™ Program
- A depot repair service 3-year limited warranty

Positioning Processor	Convertible tablet ultraportable; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology										<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows <sup>®</sup> 7 Professional 64		
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager		
Optical Ultrabay SATA disk	Some: DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3										<b>Preloaded applications<sup>14</sup></b> (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows		
mSATA™ SSD	None												
Widescreen display	Outdoor: <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS MultiTouch: <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom												
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)</i>												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										Supports ThinkVantage® technologies		
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	without UltraBase; 3-cell: 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm 6-cell: from 3.67 lb (1.66kg); 6-cell: from 3.97 lb (1.80kg) Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None 3-cell (30Whr): up to 4.7 hr; 6-cell (66Whr): up to 9.9 hr; external battery (64Whr, 0A36280): up to 10.2 hr; 6-cell plus external battery: up to 20.1 hr										<b>ThinkPad Ultrabase Series 3</b> • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632		
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)										Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g		
PCIe Mini Card PCIe WLAN <sup>4</sup> PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS												
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack												
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip										65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>		
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available												

See footnotes for more detailed information

# ThinkPad X230 Tablet (3435) - TopSeller - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>3</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger-print reader	Bat-tery cells	Intel vPro	Preload (mm/yy)	Ann date
3435-2JU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205 <sup>28</sup>	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-2HU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-24U	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-22U	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	None	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	06/12
3435-5HU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-5GU	i5-3320M	4GBx1	12.5" HD Multi	720p	500G 7200	Optional	Opt	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-5AU	i5-3320M	4GBx1	12.5" HD Multi	720p	180G SSD	Optional	Opt	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12
3435-59U	i7-3520M	4GBx1	12.5" HD Multi	720p	500G 7200	DVD±RW	UltraB	Backlit	Intel 6205	WWAN upg	Fing	6	vPro	Pro 64	07/12

- **Small and medium business (SMB) model(s), part of the US TopSeller™ Program**
- **A depot repair service 3-year limited warranty**

Positioning	<i>Convertible tablet ultraportable; one spindle</i>										<b>Preloaded operating system<sup>20</sup></b>				
Processor	<b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										- Genuine Windows® 7 Professional 64				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Ready to install applications<sup>14</sup></b> (only some listed)				
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3										• Rescue and Recovery™				
mSATA™ SSD	None										• Password Manager				
Widescreen display	<i>Outdoor:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color,</b> anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color,</b> anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen,</b> pen holder in side base (right), <b>rotate and swivel hinge,</b> power, reset, and rotation buttons on display bottom										<b>Preloaded applications<sup>14</sup></b> (only some listed)				
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus										• Norton™ Internet Security 2012 (30 days of virus definitions)				
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort)@60Hz; 2048x1536 (VGA)@75Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915)										• Access Connections™				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										• ThinkVantage Power Manager				
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr										• ThinkVantage Tools				
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)										• FingerPrint Software (fingerprint models)				
PCIe Mini Card PCIe WLAN <sup>4</sup> PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack										• Microsoft® Office preloaded; purchase a product key to activate				
Security Security chip FingerPrint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip										• Skype™ for Windows				
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available										Supports ThinkVantage® technologies				
											<b>ThinkPad Ultrabase Series 3</b>				
											• Provides desktop expansion and cable management for X230 and X230 Tablet				
											• Easily connects to the bottom of the X230 or X230 Tablet for traveling				
											• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: - Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632				
											Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g				
											65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				

See footnotes for more detailed information

# ThinkPad X230 Tablet (3437)

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>3</sup> rpm	Optical in UltraBase	ThinkPad Backlit Ultrabase Series 3	key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Carrier	Battery cells	Intel vPro	Global (G) Pre-load	Ann date (mm/yy)	
3437-3LU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	6205 <sup>28</sup>	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-32U	i7-3520M	4GBx2	12.5" HD <i>Out</i>	720p	180G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2YU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2XU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro		Pro 64 06/12
3437-2WU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	500G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2VU	i5-3320M	4GBx1	12.5" HD <i>Mul</i>	720p	500G 7200	DVD±RW	UltraB	None	6205	upg	None	BT	6	vPro		Pro 64 06/12
3437-2UU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro		Pro 64 06/12
3437-2TU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	320G 7200	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2SU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	None	BT	6	vPro	G	Pro 64 06/12
3437-2RU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	6205	Gobi	select	BT	6	vPro		Pro 64 06/12
3437-3KU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 07/12
3437-2ZU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	128G SSD	Optional	Opt	None	6205	upg	None	BT	6	vPro	G	Pro 64 07/12
Positioning Processor	Convertible tablet ultraportable; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64				
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											<b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager				
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3											<b>Preloaded applications<sup>14</sup></b> (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows				
mSATA™ SSD	None															
Widescreen display	<i>Outdoor:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom															
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus															
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)											Supports ThinkVantage® technologies				
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None											<b>ThinkPad Ultrabase Series 3</b> • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632				
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr															
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)															
PCIe Mini Card PCIe WLAN <sup>4</sup> PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 <i>Some:</i> Wireless WAN upgradable <i>Some:</i> Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS															
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	<i>Some:</i> User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack											Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g				
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip											65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>				
Limited warranty <sup>12</sup>	3-years/1-yr battery - depot repair service / service upgrades <sup>22</sup> available															

See footnotes for more detailed information

# ThinkPad X230 Tablet (3437) - II

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger print reader	Bat-tery Blue-tooth cells	Global Intel (G) vPro GMP (P)load	Ann date (mm/yy)	
3437-2QU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	None	320G 7200	Optional	Opt	None	6205 <sup>28</sup>	upg	None	6	vPro	Pro 64	06/12
3437-2AU	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	Optional	Opt	None	6205	upg	Fing BT	6	vPro	Pro 64	06/12
3437-27U	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	720p	128G SSD	Optional	Opt	None	6205	upg	Fing BT	6	vPro	Pro 64	06/12
3437-24U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	Fing BT	6	vPro	Pro 64	06/12
3437-23U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	720p	180G SSD	DVD±RW	UltraB	None	6205	upg	Fing BT	6	vPro	Pro 64	06/12
3437-22U	i5-3320M	4GBx1	12.5" HD <i>Out</i>	720p	320G 7200	DVD±RW	UltraB	None	6205	upg	Fing BT	6	vPro	Pro 64	06/12

• A depot repair service 3-year limited warranty

Positioning Processor	<i>Convertible tablet ultraportable; one spindle</i> <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology	<b>Preloaded operating system<sup>20</sup></b> - Genuine Windows® 7 Professional 64 <b>Ready to install applications<sup>14</sup></b> (only some listed) • Rescue and Recovery™ • Password Manager
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets	<b>Preloaded applications<sup>14</sup></b> (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3	
mSATA™ SSD	None	
Widescreen display	<i>Outdoor:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom	
Camera	<i>Some:</i> HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus	
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)	Supports ThinkVantage® technologies <b>ThinkPad Ultrabase Series 3</b>
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None	• Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: – Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632
Dimensions <sup>3</sup> Weight <sup>2</sup> Case material Battery - type Extended Battery Battery - life <sup>10</sup>	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg) <i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None <i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr	Other features: • Power button (front) • Security key lock, security keyhole • Analog VGA DB-15 monitor port • DisplayPort (supports single-link DVI-D via cable 45J7915) • Four USB 2.0 ports • Gigabit ethernet (RJ-45) port • Microphone in and headphone out • Requires 65W or 90W AC adapter • 1.39 lb; 630g
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)	
PCIe Mini Card PCIe WLAN <sup>4</sup> PCIe WWAN Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Wireless WAN upgradable None None <i>Some:</i> Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack	
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant <i>Some:</i> AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip	<b>65-watt AC Adapter</b> EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>
Limited warranty <sup>12</sup>	<b>3-years/1-yr battery</b> - depot repair service / service upgrades <sup>22</sup> available	

See footnotes for more detailed information

# ThinkPad X230 Tablet (3438) - Onsite

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Camera	Disk SATA GB <sup>2</sup> rpm	Optical in UltraBase Series 3	ThinkPad Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Finger-print reader	Bat-tery toothcells	Global (G) Intel vPro (P)	Ann date (mm/yy)
3438-3UU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	DVD±RW	UltraB	None	Intel 6205 <sup>28</sup>	upg	None	Fing BT	6 vPro G P 06/12
3438-3TU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P 06/12
3438-2UU	i7-3520M	4GBx2	12.5" HD Out	720p	180G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro 06/12
3438-2TU	i5-3320M	4GBx1	12.5" HD Out	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro 06/12
3438-2SU	i5-3320M	4GBx1	12.5" HD Multi	720p	128G SSD	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro 06/12
3438-2QU	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	Gobi select	Fing BT	6 vPro 06/12	
3438-2PU	i5-3320M	4GBx1	12.5" HD Multi	No	320G 7200	Optional	Opt	None	Intel 6205	upg	None	No No	6 vPro 06/12
3438-2JU	i5-3320M	4GBx1	12.5" HD Out	720p	500G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro 06/12
3438-27U	i5-3320M	4GBx1	12.5" HD Out	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P 06/12
3438-26U	i5-3320M	4GBx1	12.5" HD Multi	720p	320G 7200	Optional	Opt	None	Intel 6205	upg	None	Fing BT	6 vPro G P 06/12
Positioning Processor	Convertible tablet ultraportable; one spindle <b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology <b>Intel Core i7-3520M processor (dual-core, 2.90GHz, 4MB Cache), Intel HD Graphics 4000</b> , DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.60GHz), HT technology											Preloaded operating system <sup>20</sup> - Genuine Windows <sup>®</sup> 7 Professional 64	
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets											Ready to install applications <sup>14</sup> (only some listed) • Rescue and Recovery™ • Password Manager	
Optical Ultrabay SATA disk	Some: DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high Some: Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ All: removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3											Preloaded applications <sup>14</sup> (only some listed) • Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows	
mSATA™ SSD	None												
Widescreen display	Outdoor: <b>12.5" (317.5mm) HD (1366x768) TFT color</b> , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS MultiTouch: <b>12.5" (317.5mm) HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture All: <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom												
Camera	Some: HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus												
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; Maximum external resolution: 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)												
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None											Supports ThinkVantage® technologies	
Dimensions <sup>3</sup> Weight <sup>2</sup>	without UltraBase; 3-cell: 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm 3-cell: from 3.67 lb (1.66kg); 6-cell: from 3.97 lb (1.80kg)											<b>ThinkPad Ultrabase Series 3</b> • Provides desktop expansion and cable management for X230 and X230 Tablet • Easily connects to the bottom of the X230 or X230 Tablet for traveling • Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side: - Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632	
Case material Battery - type Extended Battery Battery - life <sup>10</sup>	Display cover: Magnesium + PCABS; Bottom: Magnesium alloy Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery None 3-cell (30Whr): up to 4.7 hr; 6-cell (66Whr): up to 9.9 hr; external battery (64Whr, 0A36280): up to 10.2 hr; 6-cell plus external battery: up to 20.1 hr												
Chipset Ultrabase Multicard Reader ExpressCard Smart Card Read Ports	<b>Mobile Intel QM77 Express Chipset</b> Some: ThinkPad Ultrabase Series 3 (see right side) 4-in-1 reader (SD, SDHC, SDXC, MMC) One slot (ExpressCard/34, ExpressCard/54) None Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)												
PCIe Mini Card PCIe WLAN <sup>4</sup> PCIe WWAN	Two PCI Express Mini Card slots 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 Some: Wireless WAN upgradable Some: Wireless WAN, Qualcomm® Gobi™ 3000 chipset, PCIe Mini Card, EV-DO Rev. A, GPRS/WCDMA/HSPA, GPS												
Carrier Modem Bluetooth™ Ethernet Intel AMT Audio support	Some: User selectable, AT&T®, Verizon®, or Sprint®, contract required with service provider None Some: Bluetooth 4.0 wireless Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 Intel Active Management Technology (iAMT) High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack												
Security Security chip Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Trusted Platform Module, TCG 1.2-compliant Some: AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip												
Limited warranty <sup>12</sup>	<b>3-years</b> /1-year battery, <b>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											65-watt AC Adapter EPEAT™ Gold rating ENERGY STAR® 5.0-compliant GREENGUARD® certified ROHS-compliant International Warranty Service <sup>17</sup> 24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>	

See footnotes for more detailed information

# ThinkPad X230 Tablet (3438) - Onsite - II

Product Specifications Reference (PSREF)

Type-model	Processor	Memory	Widescreen display	Disk SATA GB <sup>o</sup> rpm	Optical in UltraBase	ThinkPad Ultrabase Series 3	Backlit key-board	PCIe Mini Card WLAN	PCIe Mini Card WWAN	Bat-tery cells	Intel vPro	Global (G) GMP (P)	Pre-load	Ann Date (mm/yy)
3438-25U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	500G 7200	Optional	Optional	None	Intel 6205 <sup>28</sup>	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-24U	i5-3320M	4GBx1	12.5" HD <i>Multi</i>	500G 7200	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-23U	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	180G SSD	DVD±RW	UltraBase	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-22U	i5-3320M	4GBx1	12.5" HD <i>Out</i>	320G 7200	DVD±RW	UltraBase	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	06/12
3438-3SU	i5-3320M	4GBx1	12.5" HD <i>Out</i>	128G SSD	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	07/12
3438-2RU	i7-3520M	4GBx1	12.5" HD <i>Multi</i>	128G SSD	Optional	Optional	None	Intel 6205	WWAN upg	6	vPro	G P	Pro 64	07/12

- Part of the Global Models Plus program with limited onsite service<sup>24</sup> 3-year limited warranty

Positioning	<i>Convertible tablet ultraportable; one spindle</i>										<b>Preloaded operating system<sup>20</sup></b>			
Processor	<b>Intel® Core™ i5-3320M processor (dual-core, 2.60GHz, 3MB Cache), Intel HD Graphics 4000,</b> DDR3 memory controller (up to 1600MHz), Intel Turbo Boost 2.0 (3.30GHz), HT technology										- Genuine Windows <sup>®</sup> 7 Professional 64			
Memory	16GB max <sup>7</sup> / PC3-12800 1600MHz DDR3, non-parity, dual-channel capable, two 204-pin SO-DIMM sockets										<b>Ready to install applications<sup>14</sup></b> (only some listed)			
Optical Ultrabay SATA disk	<i>Some:</i> DVD burner, removable from ThinkPad Ultrabase Series 3 Supports Ultrabay Slim devices in optional or standard ThinkPad Ultrabase Series 3 (0A33932) <i>Some:</i> Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" wide, 7mm high <i>Some:</i> Hard Disk Drive / SATA 3.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ <i>All:</i> removable, upgradable, Shock Mounted Hard Drive, supports the second disk in optional or standard ThinkPad Ultrabase Series 3										• Rescue and Recovery™ • Password Manager			
mSATA™ SSD	None										<b>Preloaded applications<sup>14</sup></b> (only some listed)			
Widescreen display	<i>Outdoor:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare display with scratch resistant Corning® Gorilla® Glass, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, 1.2% reflectivity, multiple anti-reflectivity layers, IPS <i>MultiTouch:</i> <b>12.5"</b> (317.5mm) <b>HD (1366x768) TFT color</b> , anti-glare, LED backlight, 300 nits, 16:9 aspect ratio, 500:1 contrast ratio, IPS, MultiTouch screen supports pen & five-finger gesture <i>All:</i> <b>WideView</b> (170° viewing), anti-reflective and anti-glare protective coatings, <b>write on screen with standard digitizer pen</b> , pen holder in side base (right), <b>rotate and swivel hinge</b> , power, reset, and rotation buttons on display bottom										• Norton™ Internet Security 2012 (30 days of virus definitions) • Access Connections™ • ThinkVantage Power Manager • ThinkVantage Tools • Fingerprint Software (fingerprint models) • ThinkVantage System Update • Adobe® Reader® • Microsoft® Office preloaded; purchase a product key to activate • Skype™ for Windows			
Camera	HD720p resolution, wide view angle, low light sensitive, face tracking, fixed focus													
Graphics	<b>Intel HD Graphics 4000</b> in processor, supports external analog monitor via VGA DB-15 and digital monitor via DisplayPort; supports dual independent display; <i>Maximum external resolution:</i> 2560x1600 (DisplayPort) @60Hz; 2048x1536 (VGA) @75Hz; 1920x1200 @60Hz (single-link DVI-D via cable 45J7915)										Supports ThinkVantage® technologies			
Keyboard TrackPoint® Touchpad ThinkLight™	6-row, 84-key, ThinkVantage button, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar <sup>13</sup> , magnifying glass UltraNav™, buttonless touchpad below keyboard, Tap Zones, multi-touch None										<b>ThinkPad Ultrabase Series 3</b>			
Dimensions <sup>3</sup> Weight <sup>2</sup>	<i>without UltraBase; 3-cell:</i> 12.0" x 9.0" x 1.1-1.23"; 305mm x 228.7mm x 27-31.3mm <i>3-cell:</i> from 3.67 lb (1.66kg); <i>6-cell:</i> from 3.97 lb (1.80kg)										• Provides desktop expansion and cable management for X230 and X230 Tablet			
Case material	<i>Display cover:</i> Magnesium + PCABS; <i>Bottom:</i> Magnesium alloy										• Easily connects to the bottom of the X230 or X230 Tablet for traveling			
Battery - type	Li-Polymer 3-cell or Li-Ion 6-cell, HW Authentication; optional external battery as 2nd battery										• Converts ThinkPad to a two-spindle system with optional Ultrabay Slim accessories in right side:			
Extended Battery	None										- Serial ATA Hard Drive			
Battery - life <sup>10</sup>	<i>3-cell (30Whr):</i> up to 4.7 hr; <i>6-cell (66Whr):</i> up to 9.9 hr; <i>external battery (64Whr, 0A36280):</i> up to 10.2 hr; <i>6-cell plus external battery:</i> up to 20.1 hr										9.5mm Bay Adapter III 43N3412 Disks supported (some): • 128GB SSD 6.0Gb/s 0A65629 • 180GB SSD 6.0Gb/s 0A65630 • 500GB Disk 7200 rpm 0A65632			
Chipset Ultrabase	<b>Mobile Intel QM77 Express Chipset</b> <i>Some:</i> ThinkPad Ultrabase Series 3 (see right side)										Other features:			
Multicard Reader	4-in-1 reader (SD, SDHC, SDXC, MMC)										• Power button (front)			
ExpressCard	One slot (ExpressCard/34, ExpressCard/54)										• Security key lock, security keyhole			
Smart Card Read	None										• Analog VGA DB-15 monitor port			
Ports	Two USB 3.0, one powered USB 2.0, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45)										• DisplayPort (supports single-link DVI-D via cable 45J7915)			
PCIe Mini Card	Two PCI Express Mini Card slots										• Four USB 2.0 ports			
PCIe WLAN <sup>4</sup>	11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2										• Gigabit ethernet (RJ-45) port			
PCIe WWAN	Wireless WAN upgradable										• Microphone in and headphone out			
Carrier	None										• Requires 65W or 90W AC adapter			
Modem	None										• 1.39 lb; 630g			
Bluetooth™	Bluetooth 4.0 wireless													
Ethernet	Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1													
Intel AMT	Intel Active Management Technology (iAMT)													
Audio support	High Definition (HD) Audio, Realtek® ALC3202 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array microphone, combo audio/mic jack										65-watt AC Adapter			
Security	Power-on password, hard disk password, supervisor password, security keyhole										EPEAT™ Gold rating			
Security chip	Trusted Platform Module, TCG 1.2-compliant										ENERGY STAR® 5.0-compliant			
Fingerprint reader	AuthenTec fingerprint reader (right base of display), used in tablet/notebook mode, LED indicator, Power On Authentication, supports the security chip										GREENGUARD® certified			
Limited warranty <sup>12</sup>	<b>3-years</b> /1-year battery, <b>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										ROHS-compliant			
											International Warranty Service <sup>17</sup>			
											24 hour x 7 day <sup>18</sup> toll-free support during the warranty period <sup>12</sup>			

See footnotes for more detailed information

© Lenovo  
(CMT2-6) July 2012

## Memory

2GB PC3-12800 DDR3 SODIMM	0A65722	ann 06/05/12
4GB PC3-12800 DDR3 SODIMM	0A65723	ann 06/05/12
8GB PC3-12800 DDR3 SODIMM	0A65724	ann 06/05/12

## Ultrabay Slim 9.5mm

*Most Ultrabay Slim accessories supported in ThinkPad Ultrabase Series 3*

Serial ATA Hard Drive 9.5mm Bay Adapter III	43N3412	ann 06/23/09
DVD ROM Ultrabay Slim Drive III	0A65628	ann 06/05/12
DVD Burner Ultrabay Slim Drive III	0A65626	ann 06/05/12

## Storage and removable storage

ThinkPad 16GB mSATA Solid State Cache Drive	0B47309	ann 12/11/12
500GB 5400rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65631	ann 06/05/12
500GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65632	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm 4K HDD <sup>41</sup>	0A65635	ann 06/05/12
320GB 7200rpm SATA 3.0Gb/s 7mm Self Encrypting (SED) OPAL Capable HDD <sup>41</sup>	0A65636	ann 08/21/12
128GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65629	ann 06/05/12
180GB SATA 6.0Gb/s 7mm Solid State Drive <sup>41</sup>	0A65630	ann 06/05/12
256GB 2.5" SATA 6.0Gb/s OPAL-capable SSD <sup>41</sup>	0A65620	ann 05/15/12

<sup>41</sup> Can be used as the main HDD or with *Serial ATA Hard Drive 9.5mm Bay Adapter III 43N3412* in ThinkPad Ultrabase Series 3

USB 2.0 Portable 500GB Hard Disk	45K1690	ann 05/26/09
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
Lenovo Slim USB Portable DVD Burner	0A33988	ann 06/14/11

## Wireless WAN (Mini PCI Express)

*Only WWAN upgradable models:*

ThinkPad Gobi™ Mobile Broadband Option	0A36185	ann 04/12/11
--	---------	--------------

## ThinkPad Expansion

Lenovo® Essential Notebook Stand	45J9292	ann 05/12/09
ThinkPad Ultrabase Series 3	0A33932	ann 03/01/11

## Keyboard

TrackPoint Cap Collection	73P2698	ann 12/16/03
UltralSlim Plus Wireless Keyboard and Mouse <sup>52</sup>	0A34032	ann 04/05/11
USB Numeric Keypad	33L3225	ann 05/01/00
Preferred Pro USB Keyboard	73P5220	ann 06/21/05
Enhanced Performance USB Keyboard	73P2620	ann 03/23/04
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.

## Mouse

Lenovo Optical Mouse (USB)	06P4069	ann 05/21/03
Lenovo Laser Mouse (USB)	41U3074	ann 01/23/07
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
ThinkPad Bluetooth Laser Mouse	0A36407	ann 06/26/12
Lenovo Wireless Laser Mouse <sup>52</sup>	0A36188	ann 12/20/11

## Multimedia

ThinkPad In-Ear Headphones with microphone	57Y4488	ann 01/07/10
--	---------	--------------

## Security

Kensington® MicroSaver® Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	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

## Tablet

ThinkPad Digitizer Pen	41U3143	ann 11/14/06
ThinkPad Tablet Tether (3-pack)	41U4820	ann 11/14/06

## Batteries

ThinkPad Battery 67 (3-cell)	0A36316	ann 06/05/12
ThinkPad Battery 67+ (6-cell)	0A36317	ann 06/05/12
ThinkPad Battery 19+ (6-cell, Slim External) <sup>43</sup>	0A36280	ann 03/01/11

<sup>43</sup> To be used along with system battery for all-day computing; attaches under ThinkPad using docking connector (not supported when using *ThinkPad Ultrabase Series 3 0A33932*)

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

ThinkPad 65W AC Adapter	40Y7696	ann 01/05/06
ThinkPad 90W AC Adapter	40Y7659	ann 09/20/05
90W UltralSlim AC/DC Combo Adapter	41R4493	ann 09/22/09

More info at [www.lenovo.com/support/poweradapters](http://www.lenovo.com/support/poweradapters)

*Charging tips for 90W UltralSlim AC/DC Combo Adapter 41R4493*

• iPod and iPhone Charge Tip (L10a)	41R4481	ann 12/18/07
• Generic Micro USB charge tip (L18)	41R4490	ann 01/06/09

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

## Carrying Cases

*Up to 12" widescreen models:*

ThinkPad X220 Tablet Sleeve	0A33883	ann 03/22/11
ThinkPad 12.5" Ultrabook Topload	0B47416	ann 12/04/12

*Up to 15.6" widescreen models:*

Lenovo Messenger Max	41U5253	ann 05/01/07
Lenovo Performance BackPack	41U5254	ann 05/01/07
ThinkPad Business Topload Case	43R2476	ann 05/13/08
ThinkPad Business Backpack	43R2482	ann 05/13/08
ThinkPad Deluxe Expander Case	43R2478	ann 05/13/08
ThinkPad Executive Leather Case	43R2480	ann 05/13/08
Lenovo Sport Backpack - Red	0A33896	ann 02/28/12
Lenovo Sport Slimcase - Red	0A33897	ann 02/28/12
Lenovo Sport Messenger - Red	0A33898	ann 02/28/12

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

Lenovo luxury cases at [www.lenovoluxurycases.com](http://www.lenovoluxurycases.com)

## Monitors

ThinkVision LT1952p Wide 19" (VGA, DP, DVI-D) <sup>69</sup>	2448MB6	ann 09/13/11
ThinkVision L2251x Wide 22" (VGA, DP)	2578HB6	ann 10/20/09

<sup>69</sup> DisplayPort cable is not included.

ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Screen Cover (USB 2.0)	1452DS6	ann 08/16/11
ThinkVision LT1421 Wide 14" Mobile Monitor with Protective Case (USB 2.0)	1452DB6	ann 08/16/11

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

## Monitor Accessories<sup>46</sup>

Lenovo USB 3.0 to DVI/VGA Monitor Adapter	0B47072	ann 08/14/12
Lenovo USB Soundbar	0A36190	ann 05/01/12
Kensington MicroSaver Cable Lock	73P2582	ann 12/29/03
Kensington Twin Head Cable Lock	45K1620	ann 09/30/08
Lenovo Security Cable Lock	57Y4303	ann 08/24/10
Lenovo Easy Reach Monitor Stand	55Y9258	ann 09/22/09

<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