

Lenovo. ThinkPad.Laptops PSREF Product Specifications Reference Version 553, December 2019

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

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Additions in this update

► New product(s)

None

▶ Others

ThinkPad E14 - spec updated

ThinkPad E15 - spec updated

ThinkPad L380 Yoga - spec updated

ThinkPad L590 - spec updated

ThinkPad T480 - spec updated

ThinkPad T490 Secure Access / Healthcare Edition - spec updated

ThinkPad T580 - spec updated

ThinkPad X395 - spec updated

Withdrawals in this update

► Withdrawn product(s)

ThinkPad A275

ThinkPad A285

ThinkPad A475

ThinkPad A485

ThinkPad L570

ThinkPad X1 Extreme



ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, In	tel Cel	eron® process	sor, or		Dimensions Weight	WxDxH: 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb / 1.36 kg
		# of Cores	# of Threads	Base Frequency	 		Memory Types	Proce Grap		Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30 i5-7Y54	2		1.0 GHz 1.2 GHz	2.6 GHz 3.2 GHz	4MB 4MB	LPDDR3-1866	Intel Graphi		Smart card reade Media reader	
	Celeron N4100 Celeron N4120	-	4	1.1 GHz 1.1 GHz	2.4 GHz 2.6 GHz	4MB 4MB	DDR4-2400	Intel Graphi	-	Ports	Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45),
	Pentium Silver N5000]		1.1 GHz	2.7 GHz	4MB	- DDN4-2400	Intel Graphi	UHD ics 605		headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics	supports exter supports dual	ntel HD Graphics 615, Intel UHD Graphics 600 or 605 in processor, upports external digital monitor via HDMI or USB Type-C; upports dual independent display:									HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec, stereo speakers, 2W x 2, Dolby® Audio™, mono digital microphone, combo audio/microphone jack
Chipset		/lax resolution: 3840x2160@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) ntel SoC (System on Chip) platform									6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Memory	4GB or 8GB / 1866MHz LPDDR3 or 2400MHz DDR4 / soldered to systemboard, no sockets									Security Security chip	Power-on password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Display	Size Resolution		71			allo			Angle	System Mgt Fingerprint reader NFC	None rNone None
	11.6" HD (1366) 11.6" HD (1366)		TN An			6:9 ⁴	800:1	45% 45%	90° 170°	Battery	Integrated Li-ion 42Wh battery MobileMark® 2014: 13.9 hr
Multi-touch (opt)	Capacitive-typ	e mult	i-touch,	supports 1	10-finger g	esture	(HD IPS only	/)		Max battery life	* Battery life varies significantly with settings, usage, & other factors
Storage	eMMC flash m				1001/					AC adapter	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter
Optical	M.2 SSD / PC None	ie ivvi	vie, PCi	e 3.0 x 2, 1	I6GD/S					Operating system	One of the following, configurable by model: • Windows® 10 Home 64
Ethernet	Realtek RTL8	111GL	JS Gigal	bit Networl	k Connect	ion				1	Windows 10 Pro 64
WLAN +	One of the follow									Limited warranty	Windows 10 Pro in S mode
Bluetooth™	Intel Wireless	Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (US or									One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN	None									Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

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ThinkPad E14 Platform Specifications

Processor	10th Gene	eration	Intel® Co	ore™ i3 / i5	/ i7 Proces	sor			Dimensions	Case Material	Dimensions (WxDxH)		
	Processor	# of	_ # of	Base	Max Turbo	Cache	Memory	Processor		Aluminum	12.80" x 9.13" x 0.70"; 325mm x 232mm x 17.9mm		
	Number	Cores	Threads				Types	Graphics		PC/ABS	12.80" x 9.13" x 0.81"; 325mm x 232mm x 20.5mm		
	i3-10110U i5-10210U i7-10510U	4	8	2.1 GHz 1.6 GHz 1.8 GHz	4.1 GHz 4.2 GHz 4.9 GHz	4MB 6MB 8MB	DDR4-2666	Intel UHD Graphics		Aluminum Display cover + PC/ABS Bottom	12.80" x 9.13" x 0.74"; 325mm x 232mm x 18.9mm		
	i7-10310U	6	12	1.1 GHz	4.7 GHz	12MB			Weight	Case Material	Weight		
Graphics										Aluminum	starting at 3.81 lb / 1.73 kg		
Graphics	Integrated (Discrete Gra	phics (N	lemory)			PC/ABS	starting at 3.90 lb / 1.77 kg		
	Intel UHD (-	ΔΛ	MD Radeon 6	- 35 (2GI	R GDDR5)			Aluminum Display cover	starting at 3.74 lb / 1.69 kg		
	Intel UHD (cs (2GB GDD)R5)		+ PC/ABS Bottom			
	supports e	externa hree in	ıl digital r	monitor via ent displavs	HDMI or U	SB Typ	e-C;	30Hz (HDMI)	Case color Case material		n or PC/ABS plastic; n or PC/ABS plastic		
Chipset Memory	Intel SoC	(Syster	m on Chi	ip) platform					Smart card reade Media reader Ports	None One USB 2.0, two USB 3	3.1 Gen 1 (one Always On),		
Display	Size Reso		on Type Surface Brightness Aspect Ratio Contrast Angle								n 1 (with the function of Power Delivery and DisplayPort), -45), headphone / microphone combo jack,		
	14.0" FHD	`		TN Anti-glar		\rightarrow		90°		* Depending on many factors, actual data transfer speed may be lower than theoretical spe			
Multi-touch	14.0" FHD None	(1920XI	0x1080) IPS Anti-glare 250 nits 16:9 700:1 170°					170	Monitor cable Bundled Accv	None None			
		lrivoo (o	no M 2 C	CD and ana l	HDD)				Camera		ional ThinkShutter camera privacy, fixed focus		
Storage	Up to two drives (one M.2 SSD and one HDD) • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 or PCle 3.0 x 4							stem™	Audio support	HD Audio, Synaptic® CX1 stereo speakers, 2W x 2,	ional milikantite camera privacy, fixed locus 11880 codec / Dolby® Advanced Audio / eadphone / microphone combo jack		
		tane™	Memory		e 3.0 x 4 Solid State S	Storage),		Keyboard UltraNav™	TrackPoint® pointing device	timedia Fn keys, optional LED backlight ce and buttonless Mylar surface multi-touch touchpad		
Optical	None	-,							Security Power-on password, hard disk password, supervisor password, security k				
Ethernet	Gigabit Et	hernet	Connect	tion, Realte	k R8111Gl	JS			Security chip Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset				
WLAN + Bluetooth™	Realtek® Intel Wire	RTL88	822CE, V AC 9560.	Wi-Fi 2x2	02.11ac + E 802.11ac +	Blueto	th 5.0, M.2 oth 5.0, M.2	2 card	System Mgt Fingerprint reade NFC	gerprint reader on power button			
	Intel Wi-	Fi 6 AX	(201, Wi-	-Fi 2x2 802	.11ax + Blu	etooth	5.0, M.2 ca	rd	Battery		attery, supports Rapid Charge (charge up to 80% in 1hr)		
WWAN	None								May battary life	with 65W AC adapter	hu		
SIM card	None								Max battery life	MobileMark® 2014: 12.8 * Battery life varies significal	nr ntly with settings, usage, & other factors		
									AC adapter	45W or 65W USB Type-C	CAC adapter		
									Operating system (optional)	 One of the following, configure Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S m No OS 			
									Limited warranty (optional)	 1-year mail-in repair se 1-year depot repair sen 1-year depot with 2-year 1-year limited onsite se 	vice ar system board repair service		
							Mil-Spec test	MIL-STD-810G military to	esting (by the end of Dec. 2019)				
									Environment	EPEAT™ Silver; ENERGY	Y STAR® 7.1; RoHS-compliant		



















ThinkPad E15 Platform Specifications

Processor	10th Generation Intel® Core™ i3 / i5 / i7 Processor	Dimensions WxDxH: 14.49" x 9.65" x 0.74"; 368mm x 245mm x 18.9mm
	Number Cores Tilleads Frequency Frequency Types Graphics	Weight Starting at 4.3 lb / 1.9 kg Case color Black or silver Case material Display cover: Aluminum;
	13-10110U 2 4 2.1 GHz 4.1 GHz 4MB 15-10210U 4 8 1.6 GHz 4.2 GHz 6MB 1.8 GHz 4.9 GHz 8MB DDR4-2666 Intel UHD Graphics	Bottom: PC/ABS plastic
		Ports One USB 2.0, two USB 3.1 Gen 1 (one Always On),
Graphics	Integrated Graphics Discrete Graphics (Memory)	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,
	Intel UHD Graphics -	security keyhole
	Intel UHD Graphics AMD Radeon 625 (2GB GDDR5) Intel UHD Graphics AMD Radeon RX 640 Graphics (2GB GDDR5)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Monitor cable None
	supports external digital monitor via HDMI or USB Type-C;	Bundled Accy None
	supports external digital monitor via HDMI of OSB Type-C, supports three independent displays; Max resolution: 3840x2160@60Hz (USB Type-C); 3840x2160@30Hz (HDMI)	Camera HD720p camera with optional ThinkShutter camera privacy, fixed focus Audio support HD Audio, Synaptic® CX11880 codec /
Chipset Memory	Intel SoC (System on Chip) platform 16GB max / 2666MHz DDR4, one DDR4 SO-DIMM socket	stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
Display		Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight
Бізріау	Size Resolution Type Surface Brightness Aspect Ratio Viewing Angle	UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	15.6" FHD (1920x1080) TN Anti-glare 220 nits 16:9 400:1 90° 15.6" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 700:1 170°	Security Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified
Multi-touch	None	Discrete model: firmware TPM 2.0 integrated in chipset System Mqt None
Storage	Up to two drives (one M.2 SSD and one HDD) • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™	Fingerprint reader Optional: Touch style fingerprint reader on power button NFC None
	M.2 2280 SSD / SATA 6.0Gb/s M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 or PCIe 3.0 x 4	Battery Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
	 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 	Max battery life MobileMark® 2014: 12.2 hr
	 Intel Optane™ Memory H10 with Solid State Storage, M.2 2280. PCIe NVMe 3.0 x 4 	* Battery life varies significantly with settings, usage, & other factors AC adapter 45W or 65W USB Type-C AC adapter
Optical	None	Operating system • Windows® 10 Home 64
Ethernet	Gigabit Ethernet Connection, Realtek R8111GUS	(optional) • Windows 10 Pro 64
WLAN +	One of the following, configurable by model:	Windows 10 Pro in S mode
Bluetooth™	 Realtek® RTL8822CE, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card 	Limited warranty • 1-year mail-in repair service • 1-year depot repair service
WWAN	None	1-year depot with 2-year system board repair service AUL OFF 2000 will be a state of the 2000 control of the 2000 contro
SIM card	None	Mil-Spec test MIL-STD-810G military testing (by the end of Jan. 2020)
	estions above may not be available in all regions	Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

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ThinkPad E480 Platform Specifications

Processor		7th Generation Intel® Core™ i3 / i5 Processor <i>(i3-7130U is NOT available in US and EMEA)</i> or							Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	he Types Graphics		Weight Case color	Starting at 3.87 lb / 1.75kg Black or silver	
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic	
	i5-7200U		4	2.7 GHZ 2.5 GHz	3.1 GHz	3MB	DDR4-2133	620	Smart card reade Media reader	rNone MicroSD card reader	
	8th Genera			1					Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On),	
	Processor Number	# of Cores	# of Threads	· · · ·	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole	
	i3-8130U i5-8250U	2 4	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Camera	*Depending on many factors, actual data transfer speed may be lower than theoretical speed HD720p camera, fixed focus	
Graphics	i7-8550U Intel HD G			1.8 GHz Intel UHD	4.0 GHz Graphics 6	8MB 20 in p	rocessor or		Audio support	HD Audio, Synaptic® CX11852 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /	
	Intel HD G	ntel HD Graphics 620 or Intel UHD Graphics 620 in processor only or only or only HD Graphics 620 or Intel UHD Graphics 620 in processor and MD Radeon RX 550 Graphics, 2GB GDDR5 memory;								dual array microphone, headphone / microphone combo jack	
	supports e	xterna	ıl digital r	nonitor via					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad	
	supports d Max resolu	ution:	1920x10	80 (HDMÍ)					Security chip (on	Power-on password, hard disk password, supervisor password, security keyhole t)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified	
Chipset Memory	32GB max	tel SoC (System on Chip) platform 2GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM socket System clocks down for processors with lower memory controller							vPro	None None Touch style fingerprint reader on the palm rest None	
Display					68), anti-gla		D backlight,	,	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)	
	Some: 14	.0" (35	55mm) Fİ	HD (1920x)	1080), anti- 00:1 contra	glare, I	_ED backlig	ght, IPS,	Max battery life	with 65W AC adapter MobileMark® 2014: 13.51 hr * Battery life varies significantly with settings, usage, & other factors	
Multi-touch	None		·						AC adapter	45W or 65W USB Type-C AC adapter	
Storage				and one HE	<i>DD)</i> ride, remov	ahle ur	naradable		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
	Some: M.	tive Pr 2 SSD	otection : O / PCIe N	System™ VVMe					Limited warranty	1-year mail-in repair service	
Optane™ memor Optical	y <i>Optional:</i> None	Intel O	ptane m	emory, PCI	le NVMe, F	Cle 3.0) x 2		Mil-Spec test	1-year depot repair service MIL-STD-810G military testing	
Ethernet		hernet	Connect	tion, Realte	k R8111G	US			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	
WLAN + Bluetooth™	One of the following, configurable by model: • Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card • Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card • Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card * Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS							card M.2 Card	Liviloriillent	El EAT GOIA (GG GHIY), ENERTAT GTALL G.1, FIGURE COMPILATE	
WWAN SIM card	None None										
	None	may n	ot be ava	ilable in all	regions.						

























ThinkPad E490 Platform Specifications

Processor Number Cores Threads Frequency F	Processor	8th Generation In	tel® Cor	e™ i3 / i5 / i	7 Processo	or				Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm			
Case material Display cover: Aluminum or PC/ABS plastic; Baselson Port American Display cover: Aluminum or PC/ABS plastic; Baselson Port Por						Cache					Starting at 3.87 lb / 1.75 kg			
Smart card reader/None T-3655U 1.6 GHz 4.6 GHz 8MB		i5-8265U		1.6 GHz	3.9 GHz	6MB	DDR4-240	ntel UH	HD Graphics	Casa matarial	Display cover: Aluminum or PC/ABS plastic;			
Ports Port			8			OIVID	55210		620	Smart card reade				
Intel UHD Graphics 220 in processor and MM Radeon RX 550X Graphics, 22B GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4996x2304 €00Hz (USB Type-C); 4096x2160 €24Hz (HDMI) Chipset Intel SoC (System on Chip) platform Memory is actually 2666MHz but run at 2400MHz duel-channel capable, two DDR4 SO-DIMM sockets in stalled memory is actually 2666MHz but run at 2400MHz duel on Intel Imitation. Display Size / Resolution Surface Type Brightness Aspect Contrast Viewing Multi-louch Ratio Ra		* i5-8365U is for spe	eicial bid	only							One USB 2.0, two USB 3.1 Gen 1 (one Always On),			
Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two DR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two dual-channel capable, two DR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two dual-channel capable	Graphics	Intel UHD Graphic AMD Radeon RX supports external supports dual inde	cs 620 in 550X G digital n epender	n processor iraphics, 20 monitor via nt display;	r and 3B GDDR5 HDMI or U	SB Typ	e-C;) 24Hz (F	HDMI)	one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and D HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than the None				
Size / Hesolution Surface Type Brightness Ratio Angle Multi-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 200 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 200 nits 16:9 400:1 170° Non-touch 14.0° FH	Memory	32GB max / 2400	MHz DE	ÒŔ4. dual-c	hannel cap ut run at 240	able, to	wo DDR4 state to Intel I	SO-DIMI imitation	M sockets		HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /			
Security chip 14.0" FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0" FHD (1920x1080) Anti-glare IPS 250 nits 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:0" Fingerprint reader Mone Mone M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 M.2 2280 SSD / S	Display			71	brightness	Ratio	Ratio	Angle			6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
14.0" FHID (1920x1080) Anti-glare 1N 220 nits 16:9 40.0"1 90" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 600:1 700" Non-touch System Mgt Fingerprint reader Optional: Touch style fingerprint reader on the palm rest None Optional: Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) None None None None System Mgt Fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: None None None										Security	, , , , , , , , , , , , , , , , , , , ,			
None Storage Up to two drives (one M.2 SSD and one HDD)											Integrated model: discrete TPM 2.0, TCG Certified			
HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: ■ Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card ■ Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None MFC None	Multi-touch	None									None			
• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3.0 x 4 to run at PCIe 3.2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None * Max battery life with 65W AC adapter Max battery life with 65W Cadapter Max battery life with 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty * 1-year mail-in repair service • 1-year depot repair service • 1-year limited onsite service * 1-year limited onsite service Mil-Spec test MIL-STD-810G military testing	Storage	Up to two drives (on • HDD / SATA 6.0	ne M.2 SS)Gb/s. 2	SD and one F .5" wide. 7r	HDD) nm high. A	ctive Pr	rotection S	vstem™		Fingerprint reader NFC	r Optional: Touch style fingerprint reader on the palm rest None			
Optional Mone Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None AC adapter 45W or 65W USB Type-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None WWAN None Mil-Spec test MIL-STD-810G military testing		 M.2 2280 SSD / M.2 2242 SSD / M.2 2280 SSD / 	/ SATA 6 / PCle N / PCle N	8.0Gb/s IVMe, PCIe IVMe, PCIe	3.0 x 2 3.0 x 4			-		,	MobileMark® 2014: 13 hr			
Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None WWAN None Mil-Spec test MIL-STD-810G military testing		ory Optional: Intel Op								<u>.</u>	45W or 65W USB Type-C AC adapter			
WLAN + Bluetooth™ One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card • None WWAN None Mil-Spec test Che of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service 1-year limited warranty 1-year depot repair service 1-year limited onsite service 1-year limited warranty 1-year depot repair service 1-year limited warranty 1-year depot repair service 1-year limited warranty 1-year mail-in repair service 1-year limited warranty 1-year mail-in repair service 1-year limited warranty 1-year mail-in repair service 1-year limited warranty		Gigabit Ethernet (Connect	ion. Realte	k R8111Gl	JS								
CIM cord None	WLAN +	One of the following	ing, cont	figurable by Vi-Fi 2x2 80	<i>model:</i> 02.11ac + E	Bluetoo	th 4.2, M.2 oth 5.0, M.	card 2 card		Limited warranty	1-year mail-in repair service1-year depot repair service			
SIM card None Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant										Mil-Spec test	MIL-STD-810G military testing			
	SIM card	None	None								EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			

Note: The specifications above may not be available in all regions.

Lenovo

























ThinkPad E490s Platform Specifications

Processor	8th Generation Intel®	Core™ i5 / i7 P	rocessor					Dimensions	<i>WxDxH:</i> 12.96" x 9.13" x 0.70"; 329mm x 232mm x 17.9mm
	Processor # of # of Number Cores Three		Max Turbo Frequency C	Cache	Memory Types		Processor Graphics	Weight Case color Case material	Starting at 3.68 lb / 1.67 kg Black or silver Aluminum
	i5-8265U i7-8565U 4 8	1.6 GHz 1.8 GHz		6MB 8MB	DDR4-240	00 Intel	UHD Graphics 620	Smart card reader	
Graphics	Intel UHD Graphics 63 Intel UHD Graphics 63 AMD Radeon RX 540 supports external digi supports three indepe Max resolution: 4096	520 in processor DX Graphics, 20 ital monitor via endent display; 5x2304@60Hz (rand 3B GDDR5 n HDMI or USI	В Туре	e-C;	⊉24Hz	(HDMI)	Ports Monitor cable Bundled Accy	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset Memory	Intel SoC (System on 32GB max / 2400MHz * Installed memory is act	z DDŔ4, dual-c	hannel capa ut run at 2400i	ble, tw MHz du	o DDR4 ue to Intel i	SO-DI limitatio	MM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /
Display	Size / Resolution	Surface Type		spect Ratio	Contrast \	/iewing Angle	Multi-touch		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	14.0" FHD (1920x1080) 14.0" FHD (1920x1080)		220 nits	16:9 16:9	400:1	90° 170°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	None	Allu-glate IFS	250 11115	10.9	600.1	170	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified
Storage	One of the following, con • M.2 2280 SSD / SAI • M.2 2242 SSD / PCI • M.2 2280 SSD / PCI	TĂ 6.0Gb/s De NVMe, PCIe De NVMe, PCIe	3.0 x 2 3.0 x 4					System Mgt	None Address of the palm rest None None Touch style fingerprint reader on the palm rest None
Optical	* Installed M.2 2280 SSE None	D is PCIe 3x4 but	run at PCIe 3x	x2 due	to M.2 SSI	D adapi	ter limitation	Battery	Integrated Li-ion 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Ethernet	Gigabit Ethernet Conr	nection, Realtel	k R8111GUS	S				Max battery life	MobileMark® 2014: 11.5 hr
WLAN + Bluetooth™	One of the following, con • Realtek® RTL8822B • Intel Wireless-AC 92	3E, Wi-Fi 2x2 80	2.11ac + Blu				d	AC adapter Operating system	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN	None							Limited warranty	1-year depot repair service
SIM card	None							Mil-Spec test	MIL-STD-810G military testing
								Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo September 2019













ThinkPad E495 Platform Specifications

Processor	AMD Ryzen™ Mobile Processors with Radeon™ Vega Graphics									Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Controlle	er	Processor Graphics	Weight	PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm Starting at 3.87 lb / 1.75 kg Black
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3		Ra	adeon Vega 3 Graphics	Case color Case material	Biack Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
	Ryzen 5 3500U	,	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-24	00 Ra	adeon Vega 8 Graphics	Smart card reade	erNone
	Ryzen 7 3700U	4	0	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Rad	deon RX Vega 10 Graphics	Media reader Ports	MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Graphics	AMD Rade supports e supports d Max resolu	xterna ual in	aľ digital depende	monitor via ent display:	a HDMI or I	JSB Type	e-C;	•	z (HDMI)	Monitor cable Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset Memory	AMD SoC 32GB max * Installed m	`/ 24 0	OMHz D	DŔ4, dual	channel ca				IMM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /
Display	Size / Resol	lution	S	Surface Typ	e Brightnes	s Aspect Ratio	Contrast V Ratio	iewing/ Angle	Multi-touch		dual array microphone, headphone / microphone combo jack
	14.0" HD (1			nti-glare TN		16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	14.0" FHD ((1920x	1080) Ar	nti-glare IP	3 250 nits	16:9	600:1	170°	Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole
Multi-touch	None									Security chip	Discrete TPM 2.0, TCG Certified
Storage	Up to two dr • HDD / SA					Active Pro	ntection Sy	/stem	тм	Fingerprint reade	rNone None
Optical	• M.2 2242 • M.2 2280 None	SSD	/ PCle	NVMe, PC	e 3.0 x 2 o			,0.0		Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr
Ethernet	Gigabit Eth	nernet	Conne	ction, Realt	ek R81110	iUS					* Battery life varies significantly with settings, usage, & other factors
WLAN +	One of the									AC adapter	45W or 65W USB Type-C AC adapter
Bluetooth™	Realtek®Intel Wire	RTL8	822BE,	Wi-Fi 2x2	302.11ac +	Bluetoot	h 4.2, M.2	card	4	- · · · · · · · · · · · · · · · · · ·	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN	None	1622-7	AC 9200), VVI-FI ZXZ	002.11ac	+ Diueloc	DITI 5.0, IVI	.Z Care	u	Limited warranty	 1-year mail-in repair service 1-year depot repair service
SIM card	None									Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo December 2019





ThinkPad E580 Platform Specifications

Processor	7th Generation Intel® Core™ i3 / i5 Processor or								WLAN +	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Cache Memory Processor Graphics		Bluetooth™	Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card
	i3-7020U		4	2.3 GHz	-	3MB 3MB	DDD4 0400	Intel HD Graphics		 Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS
	i3-7130U i5-7200U	2	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB	DDR4-2133	620	WWAN SIM card	None None
	8th Genera	ation In	itel Core	i3 / i5 / i7 F	Processor				Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.95mm
			# of Threads	Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver
	i3-8130U i5-8250U	2	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic
	i7-8550U * i3-7130U is	s NOT a	available ii	1.8 GHz	4.0 GHz 1FA	8MB			Smart card reader Media reader Ports	MicroSD card reader
	Intel HD G Intel HD G AMD Rade supports e	* i3-7130U is NOT available in US and EMEA Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and AMD Radeon RX 550 Graphics, 2GB GDDR5 memory; Supports external digital monitor via HDMI or USB Type-C;								One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	supports dual independent display; Max resolution: 1920x1080 (HDMI)@60Hz Intel SoC (System on Chip) platform								Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Memory	32GB max * System clo	/ 2400	MHz DD	R4. dual-c	hannel cap	able, t	wo DDR4 S	O-DIMM sockets		dual array microphone, headphone / microphone combo jack
Display	Some: 15	.6" (39	6mm) H		88), anti-gla	are, LE	D backlight,		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Some: 15	.6" (39	6mm) Fl		1080), anti-	glare, l	LED backlig	ht, IPS,		Power-on password, hard disk password, supervisor password, security keyhole t)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
	None								vPro Fingerprint reader	None r Optional: Touch style fingerprint reader on the palm rest
Storage	Up to 2 drive Some: HD					able. ur	ogradable.		NFČ .	None
		tive Pro	otection S	System™	,	, -,	3 ,		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optane™ memory	Optional: 1				e NVMe, P	Cle 3.0) x 2		Max battery life	MobileMark® 2014: 12.23 hr *Battery life varies significantly with settings, usage, & other factors
	None Gigabit Eth	a rnat	Cannaat	ion Doolto	- D011101	ıc			AC adapter	45W or 65W USB Type-C AC adapter
Ememer	Gigabil Eli	iemet	Connect	ion, Realte	KHOIIIGU	15			Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
										One of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo August 2019

















ThinkPad E590 Platform Specifications

Processor	8th Generation Intel®	® Core	™ i3 / i5 / i	7 Processo	r				Dimensions	<i>WxDxH:</i> 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm
	Number Cores Thr		Frequency	Frequency	Cache	Memory Types		Processor Graphics	Weight Case color Case material	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;
	i5-8265LI	8	2.1 GHz 1.6 GHz 1.8 GHz	3.9 GHz 3.9 GHz 4.6 GHz	4MB 6MB 8MB	DDR4-24	00 Intel	UHD Graphics 620	Smart card reade Media reader	Bottom: PC/ABS plastic rNone MicroSD card reader
Graphics	Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon RX 550X Graphics, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)								Ports One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and Dis HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theore None Monitor cable	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset Memory	Intel SoC (System or 32GB max / 2400MH * Installed memory is ac	Hz DDI	Ŕ4, dual-ch						Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Display	Size / Resolution	Surf	face Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Multi-touch		dual array microphone, headphone / microphone combo jack
	15.6" HD (1366x768)		glare TN	220 nits	16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	15.6" FHD (1920x1080) None)) Anti-	glare IPS	250 nits	16:9	600:1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified
Storage	Up to two drives (one M • HDD / SATA 6.0Gb • M.2 2280 SSD / SA • M.2 2242 SSD / PO	o/s, 2.5 ATA 6.0	5" wide, 7m 0Gb/s	m high, Ac	tive Pr	otection S	System™	тм	System Mgt	Discrete model: firmware TPM 2.0 integrated in chipset None r Optional: Touch style fingerprint reader on the palm rest None
Optane™ memor	 M.2 2280 SSD / PC * Installed M.2 2280 SS ry Optional: Intel Optar None 	SD is Po	Cle Śx4 but i	run at PCle			SD adap	ter limitation	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet	Gigabit Ethernet Cor	abit Ethernet Connection, Realtek R8111GUS							AC adapter	45W or 65W USB Type-C AC adapter
WLAN +	One of the following, co								Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™	 Realtek® RTL88228 Intel Wireless-AC 9 	BE, W 9260, V	/ı-Fi 2x2 80 Mi-Fi 2x2 8	2.11ac + B 02.11ac +	luetoo Blueto	th 4.2, M. oth 5.0, N	2 card 1.2 card	<u></u>	Limited warranty	One of the following, configurable by model: 1-year mail-in repair service
WWAN	None									1-year depot repair service
SIM card	None								Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo August 2019













ThinkPad E595 Platform Specifications

Processor # of Number Cores Thread	Base Max Turbo	0 1	N.4			
Byzen 3	s Frequency Frequency	Cache	Memory	Processor	Weight Case color	Starting at 4.7 lb / 2.1 kg Black
INVZEIIO I . I .	1 1 1	1MB L2	Controller		Coop motorial	Display cover: Aluminum;
3200U 2 4	2.6 GHz 3.5 GHz	4MB L3		Radeon Vega Graphics	3	Bottom: PC/ABS plastic
Ryzen 5 3500U 4 8	2.1 GHz 3.7 GHz	2MB L2 / 4MB L3	DDR4-240	Padaan Vaga	Media reader	MicroSD card reader
Ryzen 7 4 0 3700U	2.3 GHz 4.0 GHz	2MB L2 / 4MB L3		Radeon RX Ve 10 Graphics	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,
Graphics AMD Radeon Vega 3, supports external digits supports dual independent Max resolution: 3840x	ıl monitor via HDMI or lent display;	USB Type	e-C;		Monitor cable Bundled Accy	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset AMD SoC (System on 32GB max / 2400MHz * Installed memory is actu	DDR4, dual-channel c	400MHz d	ue to AMD li	mitation	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	Surface Type Brightne	Ratio		ingle Multi-touc	— I IltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Anti-glare TN 220 nits			90° Non-touc	Coourity	Power-on password, hard disk password, supervisor password, security keyhole
[15.6" FHD (1920x1080)]	Inti-glare IPS 250 nits	16:9	600:1	170° Non-touc	Security chip	Discrete TPM 2.0, TCG Certified
Multi-touch None	000 / //00)				Fingerprint reade	er None None
Storage Up to two drives (one M.2 • HDD / SATA 6.0Gb/s		Active Pro	ntection Sv	stem™		
 M.2 2242 SSD / PCI6 	NVMe, PCIe 3.0 x 2			3.0111	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
M.2 2280 SSD / PCIe Optical None	NVMe, PCIe 3.0 x 4				Max battery life	MobileMark® 2014: 10.3 hr
1 110.10	odine Dooled Dodge	2110			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Ethernet Gigabit Ethernet Conn		305				n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + One of the following, constitution of the following of the followi	Mi Ei 2v2 902 1120	Bluetoot	h 1 2 M 2	oard		·
• Intel Wireless-AC 926	0, Wi-Fi 2x2 802.11ac	+ Bluetoo	oth 5.0, M.2	card 2 card	Limited warranty	1-year mail-in repair service
WWAN None			·		<u> </u>	1-year depot repair service
SIM card None					Mil-Spec test	MIL-STD-810G military testing
					Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo November 2019



















ThinkPad L13 Platform Specifications

Processor	10th (Generation	Intel® (Core™ i3	/ i5 / i	7 Processor				Smart card reader Optional: Smart card reader			
	Proces Numb		# of Thread	Bas Is Freque		Max Turbo Frequency Ca		Memory Proce Types Grap		Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),		
	i3-101 i5-102 i7-105	10U ₄	8	2.1 G 1.6 G 1.8 G	Hz	4.2 GHz 6	MB DI MB	DR4-2666 Intel UHD	Graphics		HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole		
Graphics	suppo	rts three in	ıl digita ıdepen	l monitor dent disc	via H	DMI or USB JSB Type-C)	,,	C; x2160@30Hz (HD	MI)	Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo USB-C to VGA Adapter • Lenovo USB-C to HDMI Adapter • Lenovo USB-C to DisplayPort Adapter • Lenovo HDMI to VGA Monitor Adapter		
Chipset Memory	Intel S 4GB,	SoC (Syster 8GB, or 160	m on C GB / 2	hip) plat 666MHz	orm DDR4	1 / soldered	to syste	emboard, no socke	ts	Bundled Accessories	 Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m 		
Display	Size	Resolution		Surface	Туре	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	(optional)	Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2		
	13.3"	HD (1366x76	68)	Anti-glare	TN	250 nits	16:9	500:1	90°	Camera	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus		
		FHD (1920x				250 nits (non-touch) 300 nits (multi-touch)	16:9	800:1 (non-touch) 700:1 (multi-touch)	170°	Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack		
	_		<u> </u>			ure (FHD or	ıly)			 Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight		
Storage		f the following 2242 SSD								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch		
Optical	M.2Inte	2280 SSD	/ PCIe Memo	NVMe, y H10 w	PCIe 3		rage,			Security Security chip System Mgt (opt) Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest		
Ethernet	RJ45	connector v	via opt	ional Thii	าkPad	-V (<i>Non-vPr</i> Ethernet Ex	o) or I2 ktensio	19-LM (<i>vPro</i>), n Adapter Gen 2 o	r	Battery	None Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
WLAN + Bluetooth™	One o		ving, co	<i>nfigurab</i> 0, Wi-Fi	le by r 2x2 80)2.11ac + Bl		1 5.0, M.2 card		Max battery life AC adapter	MobileMark® 2014: 14.1 hr *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter		
WWAN SIM card	Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card None None									(optional)	• Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro in S mode		
Dimensions Weight Case color Case material	WxDxH: 12.26" x 8.62" x 0.69"; 311.5mm x 219mm x 17.6mm Starting at 3.06 lb / 1.38 kg Black or Silver Display cover: Aluminum Bottom: GFRP									1	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 		
										Mil-Spec test	MIL-STD-810G military testing		
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
Note: The specifics		h a a ma a m		ن ملطمانون	مبر الم						Lenovo		

Note: The specifications above may not be available in all regions.

Lenovo December 2019





ThinkPad L380 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm			
	Processor Number	# of	# of	Base Frequency	Max Turbo	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 3.22 lb / 1.46 kg Black or Silver		
		Cores					Types	Intel HD Graphics	Case material	Display cover: Aluminum		
	Cel 3965U		2	2.2 GHz	-	2MB		610	Smart card reade	Bottom: GFRP		
	i3-7020U			2.3 GHz	-		DDR4-2133	Intel HD Graphics	Media reader	MicroSD card reader		
	i3-7130U i5-7200U		4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB 3MB		620	Ports	Two USB 3.1 Gen 1 (one Always On),		
	8th Genera	ation Ir	ntel Core			02		l.		two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack,		
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor		microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	Number	Cores		Frequency	Frequency		Types	Graphics	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter		
	i3-8130U i5-8250U	2	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB		Intel UHD Graphics	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
	i5-8350U	4	8	1.7 GHz	3.6 GHz	6MB	DDR4-2400	620	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable		
	i7-8550U	i7-8550U 1.8 GHz 4.0 GHz 8MB							Camera	HD720p camera, fixed focus		
Graphics	Intel HD G	raphic	s 610, 62	20 or Intel U	JHD Graph	ics 620	in process	or;	Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /		
	supports e					эв тур	e-C;			dual array microphone, headphone / microphone combo jack		
-	Max resolu	ution: 4	4096x23	04@60Hź	ÚSB Type-	C); 40	96x2160@3	30Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchoad, multi-touch		
Chipset Memory	Intel SoC (ahla tı	NO DDR4 S	O-DIMM sockets	Security	Power-on password, hard disk password, supervisor password, security keyhole		
	* System cla	ocks do	wn for pro	cessors with	lower mem	ory conti	roller	O DIWIW SOCKERS	Security chip	Discrete TPM 2.0, TCG Certified		
Display	Some: 13	3.3" (3	38mm) H	D (1366x7	68), anti-gl	are, LE	D backlight	,	vPro (optional)	Intel vPro Technology r Optional: Touch style fingerprint reader on the keyboard bezel,		
							LED backlig	ıht, IPS,	anti-spoofing technology			
Multi touch (ont)						ast ratio	o, 170° view	ing angle	NFC (optional)	Near Field Communication		
Multi-touch (opt) Storage	One of the f		<u> </u>						Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
Storage	 M.2 SSE) / SAT	A 6.0Gb/	s (e.g. xxx	GB SSD M	.2)			Max battery life	MobileMark® 2014: 16.1 hr		
Optical	 M.2 SSE None) / PCI	e NVMe,	PCIe 3.0 x	4, 32Gb/s	(e.g. x	xxGB SSD	M.2 PCIe NVMe)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
Ethernet		l Fthe	rnet Con	nection I21	9-V (Non-v	Pro) or	1219-LM (v	(Pro)	Operating system	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
Linomot	via optiona						IZ TO LIVI (V	7 70)	Limited warranty	One of the following, configurable by model:		
WLAN +								h 4.1, M.2 card		 1-year depot repair service 3-year/1-yr battery depot repair service 		
Bluetooth™ WWAN		* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS								3-year/1-yr battery limited onsite service		
SIM card	None None								Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		

Note: The specifications above may not be available in all regions.

Lenovo August 2019

















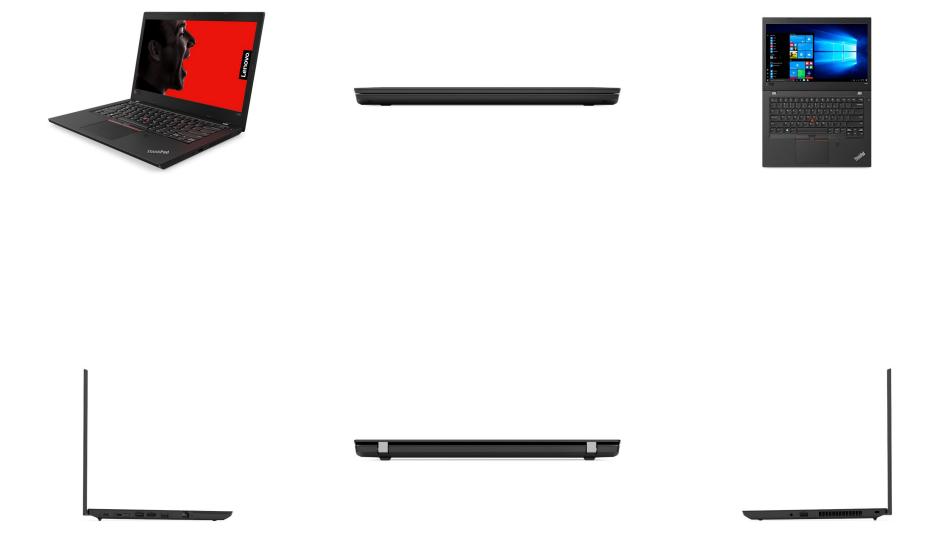




ThinkPad L390 Platform Specifications

Processor	Intel® Cel	eron® P	rocesso	or or 8th	Generation	ntel Cor	e™ i3 / i5 / i7	7 Process	sor	Smart card readerNone			
			# of Threads	Base Freque	Max Turb		Memory Types			Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),		
	Cel 4305U	2	2	2.2 GH	z -	2MB	DDR4-2133 Intel UHD Graphics 610			two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole			
	i3-8145U	4	4	2.1 GH	_						* Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	i5-8265U		8	1.6 GH			DDR4-2400			Monitor cable	USB-C to VGA Adapter: Lenovo USB-C to VGA Adapter		
	i5-8365U 4		8	1.6 GH			_	6	20	(optional)	USB-C to VGA (plus Power) Adapter: Lenovo USB-C to VGA plus Power Adapter USB-C to HDMI Adapter: Lenovo USB-C to HDMI Adapter		
Graphics	Intel UHD Graphics 610 or 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;						30Hz (HD	OMI)	Bundled Accessories (optional)	USB-C to HDMI (plus Power) Adapter: Lenovo USB-C to HDMI plus Power Adaptus- USB-C to DisplayPort Adapter: Lenovo USB-C to DisplayPort Adapter USB-C to USB-A Adapter: Lenovo USB-C to USB-A Adapter USB-C to USB-C Cable 2m: Lenovo USB-C to USB-C Cable 2m			
Chipset Memory Display	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation									Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone. headphone / microphone combo iack		
Display	Size Resolution				Type Brightne	Hatio	Contras		Viewing Angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch		
	13.3" HD	`			TN 250 ni		700:1 (no		90°	Security	Power-on password, hard disk password, supervisor password, security keyhole		
	13.3" FHD (1920		1080) A	nti-glare	IPS 250 ni	s 16:9	800:1 (mu		170°	Security chip	Discrete TPM 2.0, TCG Certified		
Multi-touch (opt) Storage	On-cell to		• •		gesture (FF	D only)				Fingerprint reader	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication		
	 M.2 228 M.2 224 M.2 228 Intel Op M.2 228 	80 SSD 12 SSD 80 SSD tane™	/ SATA / PCle / PCle Memory	6.0Gb/s NVMe, F NVMe, F / H10 wi	Cle 3.0 x 2 Cle 3.0 x 4 h Solid Stat	e Storag	Э,			Battery Max battery life AC adapter	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.61 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
Optical	None						10101111	- ,		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
Ethernet	Native Int via option Lenovo U	al Thinl	kPad Et	hernet E	ktension Ca	- <i>vPro</i>) o ble or	r I219-LM (เ	/Pro)		Limited warranty One of the following, configurable by model: 1-year depot repair service			
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 		
WWAN SIM card	None None									Mil Occasion	3-year/1-yr battery limited onsite service		
Dimensions Weight Case color Case material		t 3.22 II Silver over: A	b / 1.46	kg	; 321.8mm >	224.2m	m x 18.8mm	1		Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

November 2019



ThinkPad L480 Platform Specifications

Processor	Intel® Celeron® F	rocesso	r, 7th Gener	ation Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor # of Number Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Wireless WAN upgradable Integrated Mobile Broadband 4G LTE,
	Cel 3965U	2	2.2 GHz	-	2MB		Intel HD Graphics 610		Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card
	i3-7020U i3-7130U i5-7200U	4	2.3 GHz 2.7 GHz		3MB 3MB	DDR4-2133	Intel HD Graphics	SIM card (opt)	* For non-WWAN modèl, it means the modél is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U	2.5 GHz 3.1 GHz 3MB 62 2.6 GHz 3.5 GHz 3MB					620	Dimensions Weight	WxDxH: 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm Starting at 3.71 lb / 1.68 kg
	8th Generation I	ntel Core	i3 / i5 / i7 F	rocessor				Case color Case material	Black PC/ABS plastic
	Processor # of Number Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Smart card reade	er Optional: Smart card reader
	i3-8130U 2	4	2.2 GHz	3.4 GHz	4MB	Туроо	Стартнос	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8250U i5-8350U i7-8550U	1.6 GHz 3.4 GHz 6MB DDR4-2400 Intel UHD Graph 620				DDR4-2400	Intel UHD Graphics 620	Forts	two USB 3.1 Tope-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
		8550U 1.8 GHz 4.0 GHz 8MB							microSD card reader, side docking connector, security keyhole
Graphics	Intel HD Graphic Intel HD Graphic	s 620 or	Intel UHD (Graphics 62				Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	AMD Radeon 53 (discrete models supports externa supports three in Max resolution:	are NOT al digital r ndepende	Γavailable in monitor via I ent displavs:	n EMEA); HDMI or U\$:		•	OHz (HDMI)	Camera (optional) Audio support	One of the following, configurable by model: HD720p camera, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / codec / codec Audio A
Chipset Memory	Intel SoC (Syste	m on Chi	ip) platform				O-DIMM sockets	<u> </u>	stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
	* System clocks do	own for pro	cessors with	lower memo	ry conti	roller		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	Some: 14.0" (35 250 nits,	16:9 asr 55mm) Fl 16:9 asr	pect ratio, 50 HD (1920x1 pect ratio, 80	00:1 contra 080), anti- 00:1 contra	st ratio glare, L st ratio	ED backlig	ht, IPS,	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the keyboard bezel,
Multi-touch (opt) Storage	On-cell touch, su System has one Hi	• •		· · ·		r etorago		1	anti-spoofing technology
Storage	Some: HDD/S	ATA 6.00	ab/s, 2.5" wi	de, 7mm h	igh, Ac	tive Protect		NFC (optional) Battery	Near Field Communication Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: SSD / S. Some: M.2 SSE Some: 128GB N	D / PCIe I M.2 SSD	NVMe, PCI	e 3.0 x 2, 1 le, PCle 3.	6Gb/s 0 x 2,	16Gb/s,	,	Max battery life	with 65W AC adapter
Optical	None	IN SIUL AS	Ziiu Sioray	e, muluany	exclus	SIVE WILLI VVV	VAIN	AC adapter	45W or 65W USB Type-C AC adapter
Ethernet	Non-vPro model vPro model:	: Intel Eth Intel Eth	nernet Conr nernet Conr	ection I219	9-V (Ja 9-LM (J	cksonville) Jacksonville)	Operating system Limited warranty	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WLAN + Bluetooth™ (optional)	One of the following • Realtek® RTL8 • Intel Dual Band	822BE, V Wireles	Vi-Fi 2x2 80 s-AC 8265,	2.11ac + B Wi-Fi 2x2 8	302.11	ac + Blueto	card (US only) oth 4.1, M.2 card	(optional)	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	* Intel 8265ac card						,	Mil-Spec test	MIL-STD-810G military testing
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

Note: The specifications above may not be available in all regions.



ThinkPad L490 Platform Specifications

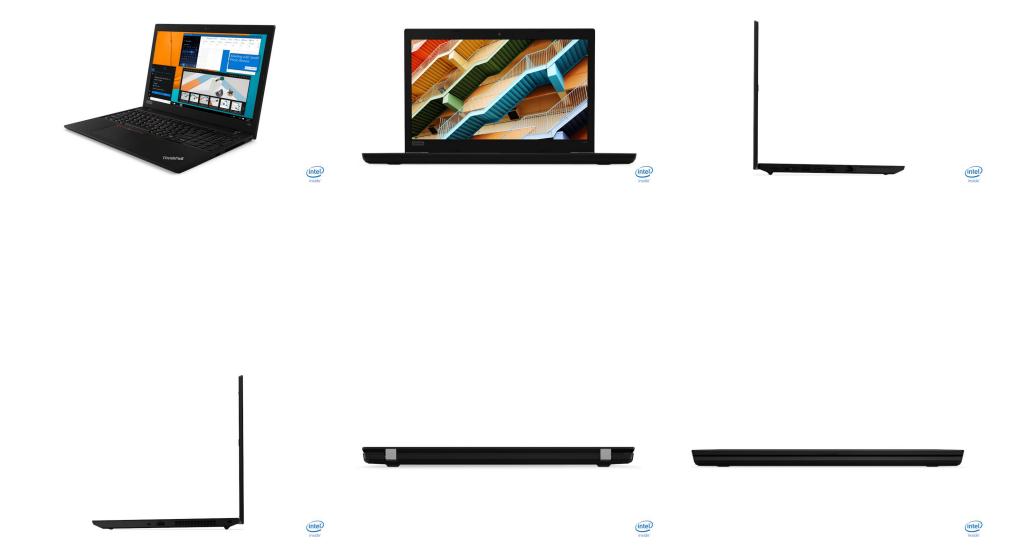
Processor	Intel® Cele	eron® F	rocesso	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	7 Proce	ssor	Dimensions	<i>WxDxH:</i> 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm		
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types		ocessor raphics	Weight Case color Case material	Starting at 3.72 lb / 1.69 kg Black BCARS plactic		
	Cel 4305U	4305U 2 2 2.2 GHz - 2MB DDR4-2133 Intel UHD Graphics Smart card reactions and the state of the s					DDR4-2133		Smart card reade	PC/ABS plastic er <i>Optional:</i> Smart card reader			
	i3-8145U i5-8265U	2	8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB				Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),		
	i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	Intel UHD Graphics 620		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),			
	i7-8565U i7-8665U	4	8	1.8 GHz 1.9 GHz	4.6 GHz 4.8 GHz	8MB			020		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.		
Graphics	Intel UHD Graphics 610 or 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon 535, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Monitor cable (optional) We provide the first of the processor only or Monitor cable (optional) Was-C to VGA: Lenovo USB-C to VGA Adapt USB-C to DP: Lenovo USB-C to DisplayPor None										microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None		
Chipset Memory	Intel SoC (System on Chip) platform 64GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2133MHz or 2400MHz due to Intel limitation								M sockets tel limitation	1 ' '			
Display		olution		pe Surface		s Aspe Rati		Gamu	ut Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
	14.0" HD (14.0" FHD			N Anti-glare S Anti-glare		16:		45% 45%		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
			<u> </u>	0-finger ge	,					Security Security chip			
Storage	SSD / SM.2 228	ATA 6. 0 SSD	0Gb/s, 2. / PCle N	.5" wide, 7r .5" wide, 7n IVMe, PCIe IVMe. PCIe	nm high 3.0 x 4	ctive P	rotection Sy	stem™		System Mgt (opt) Fingerprint reader	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication		
Optane™ memory	* Installed I	N.2 228	0 SSD is I	PCIe 3x4 but	run at PCIe	<i>3x2 due</i> Cle 3 (e to M.2 SSD	adapter	limitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
Optical	None									Max battery life	MobileMark® 2014: 12 hr *Battery life varies significantly with settings, usage, & other factors		
Ethernet	Non-vPro vPro mod			nernet Conr nernet Conr			icksonville) Jacksonville	:)		AC adapter	45W, 65W, or 65W slim USB-C AC adapter		
WLAN +			g, configu	rable by mod	el:	,		,			Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
Bluetooth™ (optional)	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card (NOT available in EMEA) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 										One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service		
MANANI (amtic : - 1)			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing		
SIM card	One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
Note: The specifica	None	movin	ot be ave	ilahla in all ı	ogione					!	Lenov		

Note: The specifications above may not be available in all regions.



ThinkPad L580 Platform Specifications

Processor	Intel® Celero	on® P	rocessor	, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
		# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A,
	Cel 3965U		2	2.2 GHz	-	2MB		Intel HD Graphics 610		 Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable
	i3-7020U	2		2.3 GHz	-	3MB	DDR4-2133		SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i3-7130U	_	4	2.7 GHz	- 0.4 011-	3MB	221112100	Intel HD Graphics 620	Dimensions	<i>WxDxH</i> : 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm
	i5-7200U i5-7300U			2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB		620	Weight Case color	Starting at 4.46 lb / 2.0 kg Black
	8th Generat	tion Ir	ntel Core	i3 / i5 / i7 l	Processor				Case material	PC/ABS plastic
		# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		None or <i>Optional:</i> Smart card reader
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB	.,,,,,,	Grapinos	Media reader	MicroSD card reader
	i5-8250U i5-8350U i7-8550U	4	8	1.6 GHz 1.7 GHz 1.8 GHz	3.4 GHz 3.6 GHz 4.0 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.
	* i3-7130U is	NOT	available i			02		I.		microSD card reader, side docking connector, security keyhole
Graphics	Intel HD Gra Intel HD Gra AMD Radeo	aphic aphic	s 610, 62 s 620 or	20 or Intel Untel UHD	JHD Graph Graphics 6	ics 620 20 in p	in process ocessor an	or only or d	Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	(discrete mo supports ex supports thr	odels terna ree in	are NOT I digital n depende	available inonitor via ent displays	in EMEA); HDMI or U ;;	•		30Hz (HDMI))HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
Chipset Memory	Intel SoC (S	Syster / 2400	m on Chi DMHz DE	p) platform	channel car	able, t	wo DDR4 S	O-DIMM sockets	Keyboard UltraNav™ Security	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
Display	Some: 15.6 220 Some: 15.6	5" (39 nits, 5" (39	6mm) HI 16:9 asp 6mm) Fl	D (1366x76 ect ratio, 5 HD (1920x	58), anti-gla 00:1 contra 1080), anti-	re, LEI st ratio glare, I	D backlight,	ht, IPS,	Security chip vPro <i>(optional)</i> Fingerprint reader	Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Multi-touch	None		<u> </u>						NFC (optional)	Near Field Communication
Storage	Some: SSI Some: M.2 Some: 128	D/SA D/SA SSD BGB N	ATA 6.0G ATA 6.0G) / PCle 1 //.2 SSD	6b/s, 2.5" w b/s, 2.5" w NVMe, PCI / PCIe NVI	ride, 7mm h ide, 7mm h e 3.0 x 2, 1 Me, PCle 3	igh, Ad igh (e.g 6Gb/s .0 x 2,	etive Protect g. xxxGB SS 16Gb/s,	,	Battery Max battery life AC adapter	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter *MobileMark* 2014: 12 hr *Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optical	in V None	1AWV	N slot as	2nd Storag	ge, mutually	exclus	sive with WV	VAN		Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Non-vPro m vPro model						cksonville) Jacksonville)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WLAN +	One of the for									3-year/1-yr battery limited onsite service
Bluetooth™ <i>(optional)</i>	 Realtek® F Intel Dual * Intel 8265a 	Band	l Wireless	s-AC 8265,	Wi-Fi 2x2	802.11	ac + Blueto	card (US only) oth 4.1, M.2 card	Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specific						-т. 1 <i>Dy</i> V	viiluuwa U3			Lenow



ThinkPad L590 Platform Specifications

Processor	Intel® Cele	eron® F	Processo	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	7 Process	or	Dimensions	<i>WxDxH:</i> 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Proce Grap		Weight Case color Case material	Starting at 4.48 lb / 2.0 kg Black PC/ABS plastic
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133	Intel UHD 61		Smart card reade	r <i>Optional:</i> Smart card reader
	i3-8145U i5-8265U	2	8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB				Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	Intel UHD 62			one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),
	i7-8565U i7-8665U	4	8	1.8 GHz 1.9 GHz	4.6 GHz 4.8 GHz	8MB 8MB]	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Graphics	Intel UHD (discrete r supports e supports t	Graph models externa three ir	nics 620 in s are NOT al digital r ndepende	available i nonitor via ent displays	and AMD n EMEA); HDMI or U	Radec SB Typ			·	Monitor cable (optional) Bundled Accy	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed # HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None One of the following, configurable by model:
Chipset Memory	Intel SoC 64GB max * Installed r	(Syste x / 240 memory	m on Chi 0MHz D[/ is actually	p) platform DR4, dual-c 2666MHz b	hannel cap ut run at 213	able, t	wo DDR4 S or 2400MHz o	O-DIMM:	sockets limitation	1 ''	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec /
Display	Size Reso	olution	Ту	pe Surface	Brightnes	s Aspe Rati		Color Gamut	Viewing Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	15.6" HD (15.6" FHD	<u> </u>		N Anti-glare		16:9		45% 45%	90° 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	None									Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	SSD / SM.2 228	ATA 6. 80 SSD	0Gb/s, 2.0 / PCIe N	.5" wide, 7r 5" wide, 7n IVMe, PCIe IVMe. PCIe	nm high 3.0 x 4	ctive Pi	rotection Sy	stem™		System Mgt (opt) Fingerprint reader	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
Optane™ memor	* Installed I	M.2 228	80 SSD is I	Cle 3x4 but	run at PCIe	<i>3x2 due</i> Cle 3.0	e to M.2 SSD) x 2	adapter lin	nitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optical Ethernet	None Non-vPro	model	l: Intel Eth	nernet Conr	ection I21	9-V (Ja	cksonville)			Max battery life	MobileMark® 2014: 12 hr *Battery life varies significantly with settings, usage, & other factors
	vPro mod	el:	Intel Eth	ernet Conr	ection I21		Jacksonville	·)		AC adapter	45W, 65W, or 65W slim USB-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (optional)	 Realtek® (NOT av Intel Wir 	RTL8 railable eless-	822BE, V in EMEA AC 9260,)2.11ac + E 302.11ac +	Blueto		card			One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WWAN (optional)							`			Mil-Spec test	MIL-STD-810G military testing
SIM card	 Integrate 	ed Mob	oile Broad	ole (special Iband 4G L Iband 4G L eans the mo	ΓΕ, Fibóco	m L830	a) D-EB, M.2 ca 350-GL, M.2 apgradable	ard (EME/ card	A only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Note: The specific		a may r	not he ava	ilahla in all r	agione					<u> </u>	Lenov



ThinkPad P1 Platform Specifications

Processor	8th Generation Intel® Co	re [™] i5 / i7 Processor or Intel X	leon® E Pro	cessor	Smart card reade	r Optional: Smart card reader
	Processor # of # of Number Cores Threads	' ' ' '	Memory Types	Processor Graphics	ExpressCard Media reader Ports	None SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On),
	i5-8400H 4 8 i7-8750H i7-8850H 6 12	2.5 GHz 4.2 GHz 8MB 2.2 GHz 4.1 GHz 9MB 2.6 GHz 4.3 GHz 9MB	DDR4-2666	Intel UHD Graphics 630	Forts	two USB 3.1 Gen 1 (one Always Cn), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole
	E-2176M	2.7 GHz 4.4 GHz 12MB		Intel UHD Graphics P630	Monitor cable	*Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Graphics	NVIDIA® Quadro® P1000	or P630 in processor and or P2000, 4GB GDDR5 men monitor via HDMI or Thunder			(optional) Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
	supports four independe		,		Camera (optional,	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Chipset Memory	Xeon processor), dual-ch	DR4, ECC or non-ECC (ECC nannel capable, two DDR4 SC	D-DIMM so	kets	Audio support	HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Display	300 nits, 16:9 as	HD (1920x1080), anti-glare, pect ratio, 700:1 contrast ratio	LED backlig),	ht, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	400 nits, 16:9 as	° viewing angle JHD (3840x2160), anti-reflect pect ratio, 1200:1 contrast rat 0° viewing angle, multi-touch		cklight, IPS,		Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Touch style match on chip fingerprint reader on the keyboard bezel
Multi-touch (opt) Pen (optional)	Lenovo Pen Pro	ich, supports 10-finger gestur			Color calibration	
Storage RAID (optional) Optical	Up to two M.2 SSD, support M.2 SSD / PCIe NVMe, I RAID 0/1 support None	s single sided M.2 2280 drives on PCIe 3.0 x 4, 32Gb/s	aly		Battery Max battery life (MobileMark 2014) AC adapter	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 7.36 hr; Hybrid mode: 13.87 hr * Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
Ethernet	via bundled or optional T	nnection I219-V (<i>Non-vPro</i>) o hinkPad Ethernet Extension (Cable `			One of the following, configurable by model: • Windows® 10 Home 64
WLAN Bluetooth™		Wi-Fi 2x2 802.11ac + Bluetoo tegrated in Wi-Fi + Bluetooth				Windows 10 Pro 64Windows 10 Pro 64 for Workstations
WWAN SIM card	None None				Limited warranty	One of the following, configurable by model: 1-year depot repair service
Dimensions	WxDxH (non-touch): 1 WxDxH (multi-touch): 1	4.24" x 9.67" x 0.74"; 361.8		'mm x 18.4mm 'mm x 18.7mm		 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Weight	Non-touch model: star Multi-touch model: star				Mil-Spec test	MIL-STD-810G military testing
Case color Case material	Black Display cover: CFRP/G Bottom: Aluminur				Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

Note: The specifications above may not be available in all regions.

Lenovo November 2019













ThinkPad P1 (2nd Gen) Platform Specifications

Processor	9th G	enera	tion Ir	ntel® Coi	e™ i5 /	/ i7 / i9 F	Processo	r or In	itel Xe	on® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Proces		# of Cores	# of Threads			lax Turbo requency	Cache		mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg;
	i5-940		4	8	+ -		4.3 GHz	8MB			оа.р.		Case color	Multi-touch model: starting at 4.0 lb / 1.81 kg Black paint (FHD model) or black weave (UHD model)
	i7-975	60H	6	12	2.6		4.5 GHz	12MB		In	tel UHD (Graphics	Case color Case material	Display cover: CFRP/GFRP hybrid;
	i7-985		6	12	+		4.6 GHz	12MB		4-2666	630	0		Bottom: Aluminum alloy
	i9-988	OH	8	16	2.3	GHz 4	4.8 GHz	16MB						er Optional: Smart card reader
	E-227	6M	6	12	2.8	GHz 4	4.7 GHz	12MB	1	In	tel UHD (P63		Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
Graphics	Intel U NVIDI suppo suppo	JHD @ IA® Qu orts ex orts fo	araph ladro terna ur ind	T1000 I digital ependei	or P63 or T20 monito nt disp	30 in pro 000, 4G or via HI olays;	only or ocessor a B GDDR DMI or TI olt); 4K@	5 mer nunde	rboĺt [™] ;				Monitor cable (optional)	(with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Chipset	Mobile	e Intel	CM2	46 Chip	set]` ′ ′	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
Memory	64GB	max	/ 2666	3MHz D	DR4, I	ECC or	non-ECC	(ECC	C func	tion sup	oorted o	nly on	Bundled Accy	
D: 1	xeon	proce	ssor)	, duai-cr	annei	capable	e, two DI						a ' ' '	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Display	Size	Resolu	tion		Туре	Surface	Bright		Aspect Ratio	Contrast Ratio	Gamut	Viewing Angle	Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec /
	15.6"	FHD (1	920x1	1080)	IPS	Anti-glar	e 300 r	nits	16:9	700:1	72% NTSC	170°] radio support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack,
	15.6"	FHD (1 Dolby \	920x1 √ision	1080) ™ HDR	IPS	Anti-glar	e 500 r	nits	16:9	1200:1	72% NTSC	170°		Dolby Atmos® sound system
	15.6"	UHD (3 Dolby \	3840x2 √ision	2160) HDR	IPS	Anti-glar	e 500 r	nits	16:9	1200:1	100% Adobe	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	15.6"	UHD (3 Dolby \ Multi-to	/ision		OLED	Anti- reflection / Anti- smudge	UDK 3	00nit	16:9	100000:1	100% DCI-P3	170°	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Multi-touch (opt)	Capa AR (a	citive-	type r	nulti-tou n) / AS (ch, su	ipports 1	10-finger	gestu	re (UF	HD OLEI	O only),		Color calibration	rTouch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None
Pen (optional)	Lenov	o Per	Pro	(special	bid or	nly)	ooug						Batterv	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Storage	M.2 2	280 S	SD /	PCĺė N\			1.2 2280 d	rives o	nly				Max battery life	MobileMark® 2014: 13.8 hr * Battery life varies significantly with settings, usage, & other factors
RAID (optional) Optical	RAID None		uppor	t									AC adapter	135W slim tip AC adapter
Ethernet	Native	e Intel	Ethe	rnet Cor	nectio	on I219-	V (<i>Non-</i> v	Pro) c	or I219	-LM (vF	?ro))		Operating system	on One of the following, configurable by model: Windows® 10 Home 64
WLAN (optional)										•			-	 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
							i-Fi + Blu			bo adapt	er		Limited warranty	One of the following, configurable by model:
WWAN SIM card	None None													 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
													Mil-Spec test	MIL-STD-810G military testing
													Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P43s Platform Specifications

Processor	8th G	eneratio	n Intel® C	ore™	i7 Proce	ssor					Dimensions	WxDxH:		70"; 329mm x 227		
	Proces					Max Turbo	Cache	Memory	Proce		Weight	Models	FHD	FHD Low Power	WQHD	
	Numb		es Threa	_		rrequency		Types	Grap	hics	-	Weight	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg	
	i5-836		8	_	.6 GHz		6MB 8MB D	DR4-2400 In	tel UHD	Graphics	Case color Case material	Black	over: PPS / 50% GF	:.		
	i7-866		"		.9 GHz		8MB	DN4-2400	62	0	Case material	Bottom:	PA / 50% GF	,		
Graphics			nhice 62) in n	rocessor	and							Smart card reader			
Graphics	NVID	A Quadr	o® P520	2GB	GDDR5	memory;					Media reader		card reader	0>		
	suppo	rts exter	nal digita	al mo	nitor via F	HDMI or USI	B Type-	·C;			Ports	one USB	3.1 Gen 1 (one Alwa 3.1 Type-C Gen 1 (w	ith the function of Po	wer Delivery and Dis	splayPort).
	suppo Max r	rts three esolutior	: indeper i: 3840x	ident 2160	displays; @60Hz (l	JSB-C); 38-	40x216	60@30Hz (H	DMI)			one USB	3.1 Type-C Gen 2 / T	hunderbolt 3 (with the	ne function of PD and	DP),
Chipset	Intel S	SoC (Sys	tem on 0	Chip)	platform			(1	headphon	b, Ethernet (RJ-45), le / microphone com	bo jack, optional sm	art card reader.	
Memory	48GB	max / 2	400MHz	DĎŔ	4, dual-ch	nannel capa		D 4 00 DIA	48.41			microSD o	card reader, side doo	king connector, seco	urity keyhole may be lower than theor	
	* Insta	or 16GB lled memo	memory orv is actu	soide ally 26	erea to sy 666MHz bu	stemboard, ut run at 2400	one טו MHz du	e to Intel limita	IIVI SOCK ation	Ket	Monitor cable	HDMI to V	g on many tactors, actu /GA:	iai data transter speed i II to VGA Monitor Ad	<i>nay be lower than theor</i> anter	eticai speed
Display							Aspect		,	Viewing	(optional)	USB-C to	VGA: Lenovo USB	-C to VGA Adapter	apto.	
	Size	Resolution	1	Туре	Surface		Ratio	Ratio		Angle	1		HDMI: Lenovo USB DP: Lenovo USB		anter	
						250 nits (non-touch)			1		Bundled Accy	None	27. 2011010 002	o to Biopiayi oi titta	артог	
	14.0"	FHD (192	0x1080)	IPS	Anti-glare	300 nits	16:9	700:1	45%	170°	Camera (optional		following, configurable			
		FHD (192	0v1080)			(multi-touch)	1				4		camera with ThinkS		cy, fixed focus er camera privacy, fixe	ad facus
	14.0"	Low Powe		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Audio support	HD Audio,	, Realtek® ALC3287	codec /	, ,,	eu iocus
		FHD (192 ThinkPad		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°		stereo spe	eakers, 2W x 2, Dolb	y® Audio™ Premium	/ e / microphone comb	امماد
		Guard	,		Anti-giare	400 1113	10.3	1000.1	12/8	170	Keyboard		uai array iar-ileid mid Il-resistant, multimed	1 7 1		oo jack
	14.0"	WQHD (2 Dolby Visi	560x1440	IPS	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	UltraNav™	TrackPoin	t® pointing device an	d buttonless Mylar s	urface multi-touch tou	uchpad
Multi-touch (opt)	-				inger ges	ture (FHD o	nly)		Muobo		Security				or password, security	/ keyhole
Pen	None	ii todoii,	оарроги		mgor goo	itaio (i i ib o	, y /				Security chip System Mgt (opt)		PM 2.0, TCG Certifi	ed		
Storage					drives onl	у					Fingerprint rèadé	r Optional:	Touch style match o	n chip fingerprint rea	der on the palm rest	
	M.2M.2	2280 SS	SD / SAL	4 6.00 NVN 2	Gb/s Me, PCIe	30 x 4					NFČ (optional)		d Communication			
	• M.2	2242 S	SD / PCI	IVN e	Me, PCIe	3.0 x 2					Battery Max battery life		l Li-ion 50Wh battery <i>rk® 2014:</i> 14.7 hr	, supports Rapid Ch	arge (charge up to 80	0% in 1hr)
		l Optane 2280, P				olid State St	orage,				Iviax battery life	* Battery li	fe varies significantly w		her factors	
Optical	None	2200, F	CIE INVIV	ie 3.0	7 X 4						AC adapter		W slim USB Type-C	<u> </u>		
Ethernet						ection I219-					· · · · · ·		10 Home 64 or Win			
		model:				ection I219-	· ·				Limited warranty	One of the	following, configurable lepot repair service	by model:		
WLAN Bluetooth™						2.11ac + Blu			. .			 3-year/1 	-yr battery depot rep	air service		
					le by mode	Ni-Fi + Blue	looth C	Jilibo adapte	3 1		 	• 3-year/1	-yr battery limited or	nsite service		
WWAN (optional)						<i>n:</i> bid only in E	EMEA)				Mil-Spec test	MIL-STD-	810G military testing)		
	 Integ 	grated M	obile Bro	adba	and 4G LT	E, Fibocom	L830-I	EB, M.2 card	l (EMEA	A only)	Environment	EPEAT™ S	Silver; ENERGY STA	AR® 7.1; RoHS-comp	liant	
	• Inte	grated M on-WWA	obile Bro V <i>model. i</i>	adba t meai	and 4G LT ns the mod	E-A, Fiboco	om L859 NAN upa	บ-GL, M.2 ca aradable	ard							
SIM card (opt)						LTE (US) SI										













ThinkPad P51 Platform Specifications

Processor	6th or 7th G							Dimensions				252.3mm x 24.5-29.4mm 252.3mm x 25.8-30.7mm
	Processor	# of	# of	Base	Max Turbo	Cache Memory	/ Processor	Weight	Models	4-cell	6-cell	
	Number	Cores	Threads	Frequency	Frequency	Types		4	Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg	
	i7-6820HQ			2.7 GHz	3.6 GHz		Intel HD Graphics 530	Case color	Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg	
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB DDR4-21	Intel HD Graphics P530	Case material		ass-Fiber Reinforced	Plastic;	
	i7-7700HQ	4	8	2.8 GHz	3.8 GHz	6MB	Intel HD Graphics	Smart card reade	er Optional: Smart	<u> </u>		
	i7-7820HQ	ļ		2.9 GHz	3.9 GHz	DDR4-24	00 630	ExpressCard	One slot (Expres			
	E3-1505M v6 E3-1535M v6	4		3.0 GHz 3.1 GHz	4.0 GHz 4.2 GHz	8MB	Intel HD Graphics P630	Media reader Ports		MC, SD, SDHC, SDX(n 1 (USB 3.0, one Al		
<u> </u>							1 000	1 0.10	Mini DisplayPort	1.2a. HDMI 1.4b. Eth	ernet (RJ-45), Dock	connector
Graphics	Intel HD Gra					essor and					ransfer speed may be lo	wer than theoretical speed
	supports ext	ernal d ir indep	ligital mo endent o	nitor via HE displays;	DMI, Mini Ďi	splayPort, or land	Thunderbolt™;	Audio support		on, fixed focus ek® ALC3268 codec / ohone, combo audio/r		1 x 2 /
	Max resoluti	38	40x2160 40x2160	@60Hz (Tr	nunderbolt);	4096x2160@	24Hz (HDMI)	Keyboard				optional LED backlight
Chipset	Mobile Intel							UltraNav™		int® pointing device ar ırface multi-touch tou		
Memory						CC function s 4 SO-DIMM s	upported only on	Security			•	vord, security keyhole
	* System cloc						ockeis	Security chip	Discrete TPM 2.0), TCG Certified	na, sapervisor passi	vora, security reyriole
Display							ght, IPS, 250 nits,	vPro (optional)	Intel vPro Techno	ology h on chip fingerprint ı	reader on the nalm r	aet
						o viewing angl	e nt, IPS, 300 nits,	Color calibration	Optional: Panton	ne® color calibrator by	X-Rite® color calibra	tion sensor in palm rest
							0° viewing angle	NFC	None			
Multi-touch (opt)	Capacitive-t	ype mu	ılti-touch,	supports 1	0-finger ges	sture, 220 nits	(FHD only)	Battery		4-cell <i>(66Wh)</i> or 6-ce	ll (90Wh)	
Pen (optional)	ThinkPad Pe					,		Max battery life ¹⁰ (MobileMark® 2014)	Model	4-cell	6-cell	
Storage	Up to 3 drives	(two M.	.2 SSD an ∆ 6 ∩Gb/	nd one HDD), s. 2.5" wide	supports sing 7mm high	gle sided M.2 22	280 drives only ction System™	(WobileWark 2014)	Discrete Graphics	4.5 hr 6.5 hr	6.1 hr	
	Some: M.2						dion System		Hybrid Graphics * Battery life varies	significantly with setting	8.9 hr	re
RAID (optional)	RAID 0/1 su	pport						AC adapter	170W slim tip AC		js, usage, & other lacto	
Optical	None	l - l - l -	4 a l		-ti 1040 V	/	<u> </u>	Operating system	One of the following	g, configurable by model	:	
Ethernet	vPro model:	<i>oaeı:</i> ır Ir	itel Ethei itel Ethei	net Connec	ction 1219-V	' (Jacksonville M (Jacksonvill) (e)		• Windows® 7 Pro		a la Mia dance 40 Dua	0.4
WLAN	One of the fol				50011 1E 10 E	ivi (odokooriviii	<u> </u>	-	Windows® 10 H	ough downgrade right ome 64	s in windows 10 Pro	0 64
	 Intel Dual I 	Band W	/ireless-/	AC 8260, W		2.11ac + BT4.1			 Windows 10 Pro 	o 64		
Pluotooth™						2.11ac + BT4.1				o 64 for Workstations		
Bluetooth™	* Intel 8260ac	: wirele :/8265a	ac card su	pport BT4.2 i	but is limited t	oth combo ad to BT4.1 by Wind	apiei dows OS	Limited warranty	One of the following1-year depot re	g, configurable by model	:	
WWAN (optional)	One of the fol	lowing, d	configurab	le by model:				1		ery depot repair serv	ice	
` , ,	 Wireless V 									tery limited onsite ser		
	 Integrated Qualcomm 					eless EM7455	5). M.2 card	Mil-Spec test	MIL-STD-810G n	nilitary testing		
SIM card (opt)							EMEA) SIM card	Environment	EPEAT™ Gold (U	IS only); ENERGY ST	ΓAR® 6.1; RoHS-com	pliant
Note: The specification			<u> </u>	`		vo [®] Connect (EMEA) SIM card	Environment	EPEAT™ Gold (U	IS only); ENERGY S	IAH® 6.1; RoHS-com	pliant













ThinkPad P52 Platform Specifications

Processor	8th Gener	ation Ir	ntel® Cor	e™ i7 / i9 Pr	ocessor or	Intel X	(eon® E Pro	ocessor	Dimensions	<i>WxDxH:</i> 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight	WxDxH(Touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm Non-touch model: starting at 5.4 lb / 2.45kg; Multi-touch model: starting at 6.4 lb / 2.9kg
	i7-8750H i7-8850H i9-8950HK	6	12	2.2 GHz 2.6 GHz 2.9 GHz	4.1 GHz 4.3 GHz 4.8 GHz	9MB 9MB 12MB	DDR4-2400		Case color Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum
	E-2176M			2.7 GHz	4.4 GHz	12MB		Intel UHD Graphics P630	Smart card reade ExpressCard	*Optional: Smart card reader None
Graphics	NVIDIA Qu P3200 (60 supports 6 supports f Max resolu	uadro® GB mer externa our ind ution:	P1000 (4 mory, VR al digital r dependen 3840X21 5120X28	ready); nonitor via it displays; 60@60Hz 80@30Hz	ory), P2000 HDMI, Min (DisplayPo	(4GB i Displa rt via N	/lini Display	or 'hunderbolt™; 'Port cable); 60Hz (HDMI)	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Three USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals
Chipset Memory	only on Xe * Installed D	n-ECC eon pro DIMMs a	C or 64ĠE ocessor), are actuall	BECC max dual-chanr	nel capable but run at 24	e, four [4 (ECC fun DDR4 SO-I due to Intel I	ction supported DIMM sockets limitation	Camera (optional,	* Depending on many factors, actual data transfer speed may be lower than theoretical speed One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Display	30 72	00 nits, 2% gan	16:9 asp nut, 160°	ect ratio, 7 viewing an	00:1 contra	ast ratio	LED backliç D, LED backli		- Audio Support	action nearles Alc3266 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Multi-touch (opt)	40)0 nits,)0% ga	16:9 asp amut, 170	ect ratio, 1 o viewing a	000:1 cont	rast rat -touch	io,	_	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Pen Storage Optane™ memory RAID (optional)	Supports purposes of the Supports purposes of	pen ac res (two HDD / M.2 St Intel O	cessory, M.2 SSD SATA 6.0 SD / PCIe Optane me	please see and one HD OGb/s, 2.5" e NVMe, PO	the acces D), supports wide, 7mn Cle 3.0 x 4	sory co single son high, , 32Gb	ompatibility sided M.2 22 Active Prot /s	for details 80 drives only ection System™	Color calibration	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest None Near Field Communication
Optical Ethernet	None			nernet Coni	nection I21	9-V (Ja	acksonville)		Battery Max battery life	Swappable Li-ion 90Wh battery Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr
WLAN	vPro mode	_					Jacksonville th 5.0, M.2	<u>'</u>	(<i>MobileMark</i> ® 2014) - AC adapter	170W slim tip AC adapter
Bluetooth™	Bluetooth	5.0 wir	reless, in	tegrated in	Wi-Fi + Blu		combo ada		Operating system	One of the following, configurable by model: • Windows® 10 Home 64
WWAN (optional)	 Wireless 	WAN	upgradal	<i>rable by mod</i> ole Iband 4G L						 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
SIM card (opt)	Intel XM	M™ 73	60 (Fibod	com L850-C nal Verizon	GL), M.2 ca	ard SIM ca	ard		Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
Note: The enecifies									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant



ThinkPad P52s Platform Specifications

Processor	8th Genera	ation I	ntel® Cor	e™ i5 / i7 F	Processor				Dimensions	WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor Number i5-8350U i7-8550U	# of Cores	# of Threads	Base Frequency 1.7 GHz 1.8 GHz	Max Turbo Frequency 3.6 GHz 4.0 GHz	Cache 6MB 8MB	Memory Types DDR4-2400	Processor Graphics Intel UHD Graphics	Weight Case color Case material	starting at 4.39 lb / 1.99 kg Black Display cover: GFRP + PPS; Bottom: GFRP
	i7-8650U	4	0	1.9 GHz	4.0 GHz 4.2 GHz	8MB	DDN4-2400	620	Smart card reade Media reader	r <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)
Graphics	Intel UHD NVIDIA Qu supports e supports tl Max resolu	uadro® externa hree ir	P500, 20 al digital r ndepende	GB GDDR: nonitor via ent displays	5 memory; HDMI or U s;	•		30Hz (HDMI)	Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC),
Chipset Memory	32GB max * System clo	k / 240 ocks do	OMHz DE	cessors with	channel cap h lower mem	ory contr	roller	O-DIMM sockets	Monitor cable	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Display	Some: 15	.6" (39	6mm) Fl	HD (1920x1	1080), anti-	glare, L	ED backlig	ht, IPS, 250 nits, iewing angle	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	Some: 15 16	.6" (39 :9 asp	6mm) UI ect ratio,	HD (3840x2 1000:1 cor	2160), anti- ntrast ratio,	glare, L 72% ga	ED backlig	ht, IPS, 300 nits, viewing angle	, , ,) One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Multi-touch (opt) Pen Storage	None				esture (FHD		storage and	4	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack
Storage	súpports sir Some: HI	ngle sid DD / S	led M.2 22 ATA 6.00	280 drives on Gb/s, 2.5" w	nly	nigh, Ac	tive Protect	tion System™	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Optane™ memory Optical	Some: M. Some: 12	.2 SSE 28GB I WWA	D / PCle I M.2 SSD N slot as	NVMe, PCI / PCIe NVI 2nd Storac	le 3.0 x 2, 1 Me, PCle 3 de, mutually	6Gb/s .0 x 2, / exclus	16Gb/s, sive with W\	,	0 1	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest anti-spoofing technology
Ethernet	Non-vPro				nection I21 nection I21			9)	NFC (optional) Battery	Near Field Communication Optional integrated Li-ion 32Wh battery and
WLAN +	Intel Dual	Band \	Wireless-	AC 8265, V	Ni-Fi 2x2 80)2.11ac	+ Bluetoot	th 4.1, M.2 card	Max battery life	swappable Li-ion 24Wh, 48Wh, or 72Wh battery
Bluetooth™					limited to B7	74.1 by V	Vindows OS		(MobileMark® 2014)	Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3 hr
WWAN (optional)	One of the fWirelessIntegrate	WAN	upgradal	ble					AC adapter	* Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter
	Intel XMI • Integrate				EB), M.2 ca	ırd (EM	EA only)			Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	Intel XMI * For non-W	M™ 73 /WAN r	60 (Fibo	com L850-0 neans the mo	GL), M.2 ca odel is NOT V n LTE (US)	VWAN u			Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year (including battery) limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant













ThinkPad P53 Platform Specifications

Processor	9th Gene	ration l	ntel® Co	re™ i5 / i	7 / i9 P	rocessoi	or Int	el Xeon®	E Pro	ocessor	•	Dimensions	<i>WxDxH (non-touch):</i> 14.86" x 9.93" x 0.96-1.16";
	Processor Number	# of Cores	# of Threads		ncy Fre	equency	Cache	Memory Types		Proces Graph			377.4mm x 252.3mm x 24.5-29.4mm WxDxH (multi-touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm
	i5-9400H i7-9750H	6	12	2.5 G 2.6 G	_		8MB 12MB		lat	مالاللال	Graphics	Weight	Non-touch model: starting at 5.51 lb / 2.5 kg;
	i7-9750H	6	12	2.6 G	_		12MB		ı	ei UHD (630		Case color	Multi-touch model: starting at 6.4 lb / 2.9 kg Black
	i9-9880H	8	16	2.3 G	Hz 4.	.8 GHz	16MB	DDR4-26			Graphics	Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum
	E-2276M	6	12	2.8 G	Hz 4.	.7 GHz	12MB		1110	P63			er Optional: Smart card reader
Graphics	Intel UHD NVIDIA® (RTX 3000 RTX 5000 supports supports Max reso	Quadro 0 (6GB 0 (16GE externa five ind	® T1000 GDDR6 B GDDR al digital lepende	(4GB G 5, VR rea 6, VR rea monitor nt displa	DDR5) dy), R1 ady); via HD ys;), T2000 FX 4000 IMI or Th	(4GB (8GB under	GDDR6, bolt™;	VR re	• • • • • • • • • • • • • • • • • • • •	or	ExpressCard Media reader Ports	None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole
Chipset Memory	Mobile In 128GB m dual-char	ax / 26	66MHzˈl	DDR4 (E	CC fur 1 SO-D	nction su IMM soc	ipporte kets	ed only o	n Xed	on proce	essor),	Monitor cable	* Power Delivery only supports power-out for charging peripherals * USB-C Dock is not supported in right-side USB-C port * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Display	Size Reso	olution		Type S	urface	Brightne	ess As	spect Cor latio Ra		Color Gamut	Viewing Angle		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	15.6" FHD			IPS Ar	ıti-glare	300 ni	ts 1	6:9 70	0:1	72%	160°	Bundled Accy	None
	Dolb	(1920x y Vision	™ HĎR	IPS Ar	iti-glare	500 ni	ts 1	6:9 120	00:1	72%	160°	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
		(3840x y Vision		IPS Ar	iti-glare	500 ni	ts 1	6:9 120	00:1	100%	170°	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 /
	15.6" Dolb) (3840x y Vision i-touch	2160) HDR,	OLED re	Anti- flection Anti-	SDR 400 HDR 50 (peak	0nit 1	6:9 1000	000:1	100% DCI-P3	170°	Keyboard	optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
Multi-touch (opt)	Capacitive anti-reflect			ıch, sup		0-finger	<u> </u>	e (UHD	only),			UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Pen (optional)	Lenovo P											Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage	Up to 3 dri supports s. • HDD / S • M.2 228 * HDD is o	inglè sid SATA 6. 30 SSD nly avail	led M.2 2 .0Gb/s, 2) / PCIe lable for T	280 drive 2.5" wide NVMe, F 1000 and	s <i>only</i> e, 7mm PCIe 3. I T2000	high, Ac 0 x 4 graphics	ctive P		Syste	em™		Security chip vPro (optional) Fingerprint reade Color calibration NFC (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology r Touch style match on chip fingerprint reader on the palm rest Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication
Optane™ memory RAID <i>(optional)</i> Optical	RAID 0/1/ None	Intel C /5 supp	ort Optane m	nemory,	PCIe N	IVMe, Po	Cle 3.0	0 x 2					Integrated Li-ion 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 8 hr; Hybrid mode: 13 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro vPro mod							acksonvil Jacksonv				AC adapter Operating system	170W or 230W slim tip AC adapter One of the following, configurable by model:
	Intel Wi-F Bluetooth	5.0 wir	reléss, ir	ntegrate	d in Wi-				adapte	ər			 Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
WWAN (optional) SIM card (opt)	One of theWirelessIntegrat* For non-INano-SIN	s WAN ed Mob WWAN n	upgrada oile Broa <i>nodel, it r</i>	able (spendable) adband 4 and the	cial bio G LTE- model	-A, Fibod is NOT W	com L8 /WAN ι	350-GL, I upgradable		ard		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
												Mil-Spec test	MIL-STD-810G military testing
												Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P53s Platform Specifications

Number Cores Threads Frequency F	Processor	8th Generation Intel® Core™ i7 Processor	Dimensions WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
Case material Display cover: PPS / 50% GF Bottom: PA / 50% G			Weight starting at 3.87 lb / 1.75 kg Case color Black
The Little Common Co		i7-856511 1.8 GHz 4.6 GHz 8MB Intol LIHD Graphic	Case material Display cover: PPS / 50% GF;
Hedia reader NVIDIA Quadro' P520, 25B GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays: Max resolution: 3840x2160 € 30Hz (HDMI) Chipset Memory A8G max / 2400MHz DDR4, dual-channel capable, Memory A8G max / 2400MHz DDR4, dual-channel capable, SGB or 1668 memory soldered to systemboard, one DDR4 SO-DIMM socket national memory is situated memory is actually 2660MHz but not at 2400MHz but not at 2400MHz but not 2800MHz but not at 2400MHz but not 2800MHz but not at 2400MHz but not 2800MHz but not			BOULDIN. PA / 50 % GF
Memory Memory soldered to systemboard, one DDR4 SO-DIMM socket histafied memory is actually 2660MHz but run at 2400MHz due to Intel limitation. Display Size Resolution Type Surface Brightness Aspect Contrast Contr		NVIDIA Quadro® P520, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 3840x2160@60Hz (USB-C); 3840x2160@30Hz (HDMI)	Media reader Ports MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
Size Resolution Type Surface Brightness Ratio Ratio Ratio Ratio Gamut More Ratio Ratio Ratio Ratio Ratio Ratio Gamut More Ratio R		48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Here we will be the properties of the second of the following, configurable by model: WILAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 wireless, integrated Mobile Broadband 4G LTE-Fibocom L830-EB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE-Fibocom L830-EB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE-Fibocom L830-EB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE-Fibocom L830-EB, M.2 card (EMEA only) in Engrand of the following, configurable by model: Nano-SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Multi-touch (opt) Nano-Bulti-touch (opt) Na	Display		USB-C to DP: Lenovo USB-C to DisplayPort Adapter
15.6° OHD (3840x2160) IPS Anti-glare 500 nits 16:9 1200:1 170° Adobe 170° Adobe 170° Adobe 170° Audio support		15.6" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 700:1 45% 170°	
Multi-touch (opt) Pen None Storage Supports single sided M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, Mone Optical Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Bluetooth™ Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Sluetooth™ Sluetooth™ Sluetooth 5.0 wireless, integrated in Wi-Fi+ Bluetooth combo adapter WWAN (optional) SIM card (opt) SIM card (opt) On-cell touch, supports 10-finger gesture (FHD only) None Keyboard UltraNav™ (Feyboard UltraNav™ (Feyboard UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional) TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security chip Discrete TPM 2.0, TCG Certified UltraNav™ (Dional TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security Certified Intel PtP (Dional) Near Fleid Intel		15.6" UHD (3840x2160) Dolby Vision™ HDR IPS Anti-glare 500 nits 16:9 1200:1 100% Adobe 170°	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage,			stereo speakers, 2W x 2, Dolby® Audio™ Premium /
• M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 Optical Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Bluetooth™ Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ WWAN (optional) WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Power-on password, hard disk password, supervisor password, security keyhold Security chip System Mgt (opt) Security Discrete TPM 2.0, TCG Certified Security chip System Mgt (opt) Intel Pro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest NFC (optional) Near Field Communication Battery Max battery life Max battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery depot repair service Mil-Spec test Mil-Spec test Mil-Spec fest MIL-STD-810G military testing	Storage	• M.2 2280 SSD / SATA 6.0Gb/s	
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth ™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) WWAN (optional) Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nec (optional) Near Field Communication Battery Max battery life *MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) **Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty *One of the following, configurable by model: *Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 11 MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) *Battery Max battery life *AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty *One of the following, configurable by model: *1-year depot repair service *3-year/1-yr battery limited onsite service *3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing		 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 Intel Optane™ Memory H10 with Solid State Storage. 	Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology
Hitel Ethernet Connection I219-V (Jacksonville) WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ WWAN (optional) WWAN (optional) Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) Integrated (opt) Intel Wireless AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter MWAN (optional) WWAN (optional) One of the following, configurable by model: Wireless WAN upgradable (special bid only in EMEA) Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1the Mobile Mark® 2014: 15 hr (FHD model) / 10 hr (UHD model) *Battery Max battery life Max battery life MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) *Battery Max battery life War arias significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery life Max battery life MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) *Battery Max battery life Max battery life War arias significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery life Max battery life Mobile Broadband, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card Mil-Spec test MIL-STD-810G military testing			
Bluetooth TM Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card *Mil-Spec test MIL-STD-810G military testing		vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Battery Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GB, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing		Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	* Battery life varies significantly with settings, usage, & other factors adapter 65W USB Type-C AC adapter
Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Tornon-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	WWAN (optional)		
Mil-Spec test MIL-STD-810G military testing	SIM card (opt)	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable 	 1-year depot repair service 3-year/1-yr battery depot repair service
Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant	/	V-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	, , ,
			Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant













ThinkPad P72 Platform Specifications

Processor	8th Generation Inte	el® Core	™ i7 Proces	ssor or Int	el Xeor	® E Proces	ssor	Dimensions	<i>WxDxH:</i> 16.38" x 11.06" x 0.96-1.16"; 416mm x 281mm x 24.5-29.4mm
	Number Cores Th		Frequency 2.2 GHz	Max Turbo Frequency 4.1 GHz	9MB	Memory Types	Processor Graphics Intel UHD Graphics 630	Weight Case color Case material	Starting at 7.5 lb / 3.4kg Black Display cover: GFRP + PPS; Bottom: Magnesium/Aluminum
	i7-8850H E-2176M E-2186M	12	2.6 GHz 2.7 GHz 2.9 GHz	4.3 GHz 4.4 GHz 4.8 GHz	9MB 12MB 12MB	DDR4-2400	Intel UHD Graphics P630	ExpressCard Media reader	r Optional: Smart card reader None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card
Graphics		600 (4G ory), P42 digital mo pendent 440X216 20X288	iB memory 200 (8GB r onitor via F displays; 50@60Hz (50@30Hz (r), P2000 memory), HDMI, Mir DisplayPo	(4GB m or P520 ni Displa ort via N	00 (16ĠB r ayPort, or T 1ini Display	Thunderbolt™;	Ports Monitor cable	Four USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable
Chipset Memory	Mobile Intel CM246 128GB non-ECC or only on Xeon proce * Installed DIMMs are	r 64ĠB l essor), d <i>actually</i> .	ECC max i dual-chann 2666MHz b	el capable out run at 24	e, four [<i>400MHz</i>	DDR4 SO-I due to Intel	DIMM sockets limitation	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Display	Some: 17.3" (439m 16:9 aspect Some: 17.3" (439m 16:9 aspect	t ratio, 8 nm) UHI	300:1 contra D (3840x2	ast ratio, 160), anti	72% ga -glare, l	mut, 170° y LED backli	viewing angle ght, IPS, 400 nits,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Multi-touch Pen	170° viewing None Supports pen acces	ng angle essory, p	lease see	the acces	ssory co	mpatibility	for details		Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest
Storage	Up to 3 drives (two M Some: HDD / SA Some: M.2 SSD /	ATA 6.0G	3b/s, 2.5" v	vide, 7mm	ո high, <i>I</i>	Active Prote	ection System™	Color calibration	
Optane™ memor RAID <i>(optional)</i> Optical	y <i>Optional:</i> Intel Opta RAID 0/1 support None	ane mer	mory, PCIe	e NVMe, F	Cle 3.0) x 2		,	Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 16 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro model: In vPro model: In		ernet Conn ernet Conn						230W slim tip AC adapter One of the following, configurable by model:
WLAN Bluetooth™	Intel Wireless-AC 98 Bluetooth 5.0 wirele	560, Wiess, inte	i-Fi 2x2 802 egrated in V	2.11ac + I Wi-Fi + Bl	Bluetoo uetooth	th 5.0, M.2 combo ad	card apter	(Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
WWAN SIM card	None None								One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
								Mil-Spec test	MIL-STD-810G military testing
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant











ThinkPad P73 Platform Specifications

Processor				e [™] i5 / i7 / i9						Dimensions	WxDxH: 16.38" x 11.06" x 1.02-1.22"; 416mm x 281mm x 25.9-31mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types		ocessor raphics	Weight Case color Case material	Starting at 7.5 lb (3.4kg) Black Display cover: GFRP + PPS;
	i5-9400H	4	8	2.5 GHz	4.3 GHz	8MB					Bottom: Magnesium/Aluminum
	i7-9750H	6	12	2.6 GHz	4.5 GHz	12MB		Intel U	HD Graphics	Smart card reade	er Optional: Smart card reader
	i7-9850H	6	12 16	2.6 GHz	4.6 GHz 4.8 GHz	12MB 16MB	DDR4-266	6	630	ExpressCard	None
	i9-9880H	8		2.3 GHz				Intel I II	HD Graphics	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Three USB 3.1 Gen 1 (one Always On),
	E-2276M	6	12	2.8 GHz	4.7 GHz	12MB			P630	Ports	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Graphics	NVIDIA Qu RTX 3000 or RTX 50 supports 6 supports f	uadro® (6GB 00 Ma externa ive ind	P620 (4 GDDR6, x-Q (160 al digital r ependen	or P630 in p GB GDDR5 VR ready), BB GDDR6, monitor via l t displays; Hz (Thunde), T2000 (RTX 400 VR ready HDMI or T	4GB GI) Max-0); hunder	Q (8GB GI bolt™;		•	Monitor cable (optional)	two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Chipset	Mobile Inte				2011), 111	000.12	(002 0 0			7`'	USB-C to VGA. Lenovo USB-C to VGA Adapter USB-C to DisplayPort Adapter
Memory	128GB ma	ax / 26	66MHz C	DR4 (ECC	function s	upporte	ed only on	Xeon p	rocessor),	Bundled Accy	None
	dual-chan	nel cap	pable, fou	ır DDR4 SC)-DIMM so					Camera (optional	/)IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Display	Size Reso			Type Surfac		iess F	spect Cont latio Rat	io Gan	nut Angle	Audio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 / dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
	17.3" FHD			IPS Anti-gla	ire 300 i	nits 1	6:9 700	1 729	% 160°	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight
N.A. dati a da	Dolby	(3840x Vision	2160) ™ HDR	IPS Anti-gla	400 i	nits 1	6:9 1000):1 100	% 170°	UltraNav™	3-button Mylar surface multi-touch touchpad
Multi-touch Pen	None None									Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage Optane™ memory RAID (optional)	HDD / SM.2 228Optional:	ATA 6. 0 SSD Intel 0	0Gb/s, 2 / PCIe N Optane m	and one HDI .5" wide, 7n IVMe, PCIe nemory, PCI	nm high, A 3.0 x 4	ctive P	rotection S			Security chip vPro (optional) Fingerprint reade Color calibration NFC (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication
Optical	RAID 0/1 : None	suppor	τ							Battery	Integrated Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet		model	: Intel Eth	nernet Conr	ection I21	9-V (Ja	cksonville)		Max battery life	MobileMark® 2014: 17.2 hr *Battery life varies significantly with settings, usage, & other factors
WLAN (optional)				i 2x2 802.1				ie)		AC adapter	170W or 230W slim tip AC adapter
Bluetooth™ (opt)				tegrated in				lapter		Operating system	One of the following, configurable by model:
WWAN	None			3						-	 Windows® 10 Home 64 Windows 10 Pro 64
SIM card	None										Windows 10 Pro 64 for Workstations
										Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant







ThinkPad T470 Platform Specifications

Processor	6th Genera	ation In	ntel® Cor	e™ i5 / i7 F	Processor o	r			WWAN (ontional)	One of the following, configurable by model (WWAN can coexist with WiGig):					
1 10000001	Processor	# of	# of	Base	Max Turbo		Memory	Processor	(optional)	Wireless WAN upgradable					
			Threads			Cache	Types	Graphics		Integrated Mobile Broadband 4G LTE-A, Overland Report Market Misselson FM7455) M.C. april					
	i5-6200U			2.3 GHz	2.8 GHz	3MB				Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card • Integrated Mobile Broadband 4G LTE.					
	i5-6300U	2	4	2.4 GHz	3.0 GHz	3MB	DDR4-2133	Intel HD Graphics		Intel XMM™ 7160 (Fibocom L831-EAÚ), M.2 card (EMEA only)					
	i7-6500U			2.5 GHz 2.6 GHz	3.1 GHz 3.4 GHz	4MB 4MB		520	SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card					
	i7-6600U	ا دداد	1 0 0 0 0			4IVIB			Dimensions	<i>WxDxH:</i> 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm					
	7th Genera					ı			Weight	Models 3-cell or 3 + 3-cell 6-cell or 3 + 6-cell					
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Magnesium 3.49 lb / 1.58 kg 3.92 lb / 1.78 kg PPS 3.63 lb / 1.65 kg 4.35 lb / 1.85 kg					
	i3-7100U	00100	moado	2.4 GHz	-	змв	Туроо	Спартноо	Case color	Black					
	i5-7200U			2.5 GHz	3.1 GHz	змв			Case material	Display cover: Magnesium Hybrid or PPS;					
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	Intel HD Graphics 620		Bottom: Glass-Fiber Reinforced Plastic					
	i7-7500U			2.7 GHz	3.5 GHz	4MB		020		or Optional: Smart card reader					
	i7-7600U			2.8 GHz	3.9 GHz	4MB			Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I Three USB 3.1 Gen 1 (USB 3.0, one Always On),					
	* i7-6500U is								-	USB 3.1 Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and DP),					
Graphics	Intel HD G				cessor only and NVIDIA		roo® 040M	,		HDMI 1.4b, Ethernet (RJ-45), Dock connector					
								e in EMEA);	WiGig dock (opt)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed ThinkPad WiGig dock					
	supports external digita			nonitor via	HDMI or U	SB Typ	e-C;	,,	Monitor cable	Optional: Lenovo USB-C to VGA Adapter					
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)						96x2160@	24Hz (HDMI)	Camera (optional	nl) 720p: HD720p resolution, fixed focus					
Chipset					· //	0), 40	OUNE TOO G	Z-F11Z (F1DIVII)	Audio ournort	IR & 720p: IR camera and HD720p camera (mutually exclusive with WiGig)					
Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets							O-DIMM sockets		HD Audio, Realtek ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack					
		System clocks down for processors with lower memory controller								6-row, spill-resistant, multimedia Fn keys, optional LED backlight					
Display					68), anti-gla				- Keyboard UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
	220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight,							ıht.	Security	Power-on password, hard disk password, supervisor password, security keyhole					
	220 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,						trast ratio		Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology					
										r <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard bezel					
Multi-touch (opt)	250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle On-cell touch, supports 10-finger gesture (FHD IPS panel with PPS cover only)								NFC (optional)	Near Field Communication					
Storage	System has one HDD slot or one M.2 2280 slot exclusively for storage								Internal battery	Optional: Integrated Li-Polymer 3-cell (24Wh)					
, and the second	Some: HD	DD / SA	ATA 6.00	3b/s, 2.5" w	vide, 7mm h	nigh, Ad	tive Protect	tion System™	External battery Max battery life	Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)					
		Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s								Models 3-cell 3 + 3-cell 6-cell 48Wh 6-cell 72Wh 3 + 6-cell 48Wh 3 + 6-cell 72Wh 13.9 hr 13.9 hr 20.9 hr 20.9 hr 27.1 hr					
	Some: 12	8GB N	1.2 SSD	/ SATA 6.0	Gb/s, in W\	WAN sl	ot as 2nd S	torage,	(MobileMark® 2014)	Discrete 6.9 hr 13.9 hr 14.3 hr 21.6 hr 21.2 hr 28.6 hr					
Onthod		utually	exclusiv	e with WW	AN and Wi	Gig				* Battery life varies significantly with settings, usage, & other factors					
Optical	None		1			0.1//1-	-1		AC adapter	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter					
Ethernet	Non-vPro r vPro mode				nection 121			<u>, </u>	Operating system	One of the following, configurable by model:					
WLAN					del (WiGig ca			<u> </u>	_	Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64					
WLAIN	Realtek®							•9•		Windows 10 Home 64					
	 Intel Dual 									Windows 10 Pro 64					
	 Intel Dual Intel Tri-R 							, M.2 card 302.11ac + BT4.1,	Limited warranty	One of the following, configurable by model:					
	M.2 card		11101035-7	10200,	TTICING COZ.	i iau T	**ITI LAZ (502.11a0 + D14.1,		 1-year depot repair service 1-year depot with 2-year system board repair service 					
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS									1-year limited onsite service					
	intel 82658	aC / 182	cosac car	u support B i	4.∠ DUT IS IIM	iitea to E	o i 4. i by Wind	JOWS US		3-year/1-yr battery depot repair service					
										3-year/1-yr battery limited onsite service					
									Mil-Spec test	pec test MIL-STD-810G military testing					
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant					
Note: The specific	ations above	may n	ot be ava	ilable in all	regions.					Lenovo					







ThinkPad T470s Platform Specifications

Processor	6th Generation Intel®	® Core™ i5 / i7	Processor			Dimensions	WxDxH: 13.03" x 8.93" x 0.67-0.74"; 331mm x 226.8mm x 16.9-18.8mm				
	Number Cores Thr i5-6200U	# of Base Frequence 2.3 GHz	2.8 GHz 3MB	Memory Types DDR4-2133	Processor Graphics Intel HD Graphics	Weight Case color Case material	Starting at 2.9 lb / 1.32 kg Black or Silver Display cover: CFRP Hybrid; Bottom: Magnesium				
	i7-6600U	2.6 GHz	3.4 GHz 4MB	JDD114-2100	520	er <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)					
	or 7th Generation Int			M	Duranan	Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On), USB 3.1 Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and DP).				
	Number Cores Thr		 	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed				
	i5-7200U i5-7300U i7-7500U i7-7600U	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.5 GHz 3MB 3.5 GHz 4MB	DDR4-2133	Intel HD Graphics 620	Monitor cable (optional)	ThinkPad WiGig dock, mutually exclusive with WWAN HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter				
Out of his						Camera (optional	I)HD720p resolution, fixed focus (models without camera are NOT available in EMEA)				
Graphics	Intel HD Graphics 52 supports external dig supports three indep	gital monitor vi pendent displa	a HDMI or USB Typ vs:	•		Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack				
Chipset	Max resolution: 409			96x2160@	24Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Memory	20GB or 24GB max ⁷ 4GB or 8GB memory * System clocks down f	⁷ / 2400MHz D y soldered to s	DR4, dual-channel systemboard, one D	DR4 SÓ-DI	IMM socket	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology				
Display		:9 aspect ratio,	700:1 contrast ratio	o, 160° view	ing angle	Fingerprint reade NFC (optional)	er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest Near Field Communication				
Multi-touch (opt)	Some: 14.0" (355mi 300 nits, 16:9 On-cell touch, suppo	9 aspect ratio,	700:1 contrast ratio	o, 160° view	klight, IPS, ring angle	Internal battery Max battery life	Front Li-Polymer 3-cell (23Wh) and rear Li-ion 3-cell (26Wh), both Integrated MobileMark® 2014: up to 10.5 hr * Battery life varies significantly with settings, usage, & other factors				
Storage	One of the following, co			•		AC adapter	45W slim tip AC adapter, 45W or 65W USB Type-C AC adapter				
	 M.2 SSD / SATA 6. M.2 SSD / PCIe N 	.0Gb/s (e.g. xx VMe, PCle 3.0	x 4, 32Gb/s (e.g. x	xxGB SSD	M.2 PCIe NVMe)	Operating system	n One of the following, configurable by model: • Windows® 7 Professional 64 preinstalled				
Optical	None Non-vPro model: Inte	al Etharnat Ca	nnaction 1010 V / Is	ا مالنه معربانام		_	through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64				
Ethernet			nnection I219-V (38)		e)		Windows 10 Pro 64				
	One of the following, co Intel Dual Band Will Intel Dual Band Will Intel Tri-Band Wirel	ireless-AC 826 ireless-AC 826	0, Wi-Fi 2x2 802.11 5, Wi-Fi 2x2 802.11	ac + BT4.1, ac + BT4.1,	M.2 card M.2 card	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service				
Bluetooth™	M.2 card	as integrated	n Mi Fi . Dhuataath	aamba ada	·	Mil-Spec test	MIL-STD-810G military testing				
	Bluetooth 4.1 wireles * Intel 8265ac / 18265a	ac card support l	BT4.2 but is limited to E	BT4.1 by Wind	dows OS	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
(One of the following, co • Wireless WAN upg • Integrated Mobile E Qualcomm® Snapo • Micro-SIM card slo	gradable Broadband 4G dragon™ X7 L	LTE-A, ΓΕ-A (Sierra Wirele	ss EM7455)), M.2 card						
SIM card (opt)	- IVIICIO-CIIVI CAIU SIO	or, opt venzon	LIL (OO) OI LEHOV	, Johnsell	(LIVILA) Olivi calu		Lenovo				

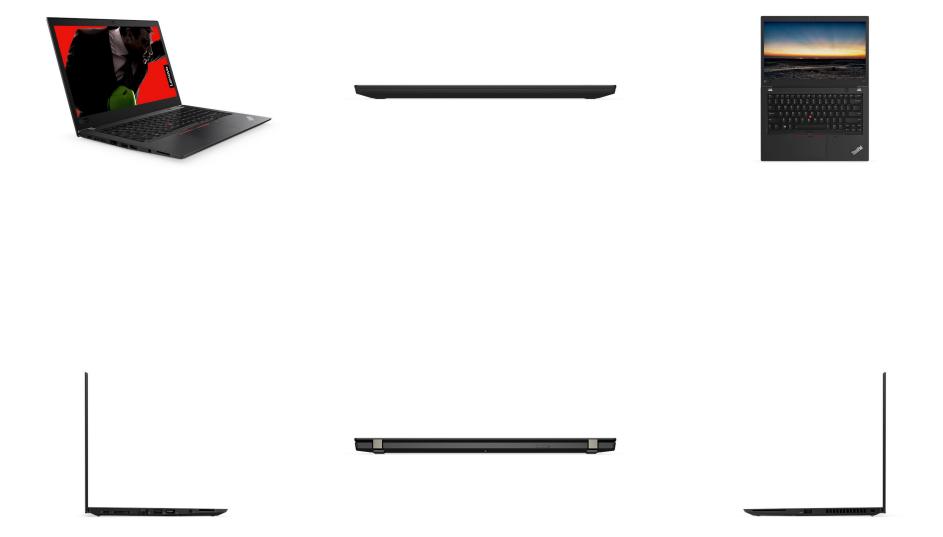






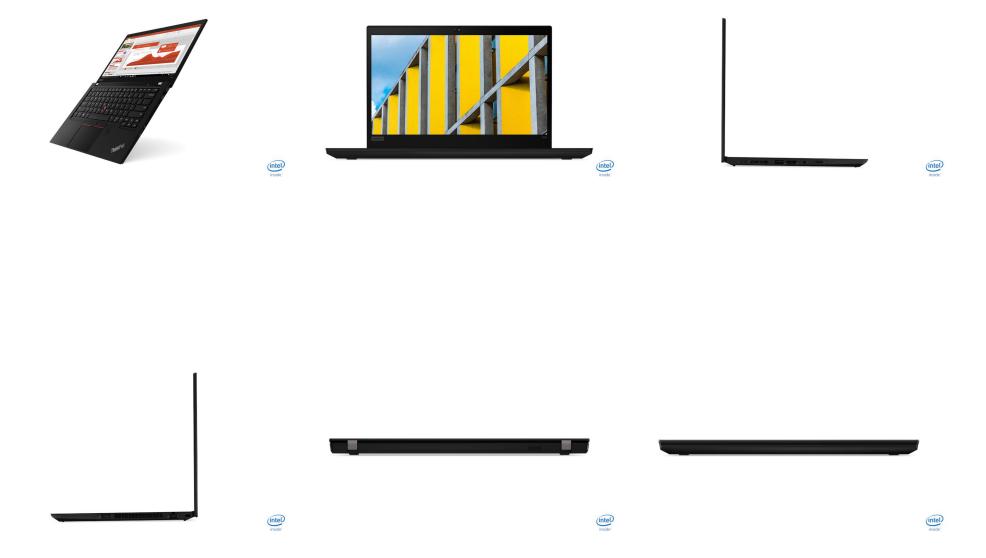
ThinkPad T480 Platform Specifications

Processor	7th Gener	ation Ir	ntel® Cor	e™ i5 Proc	essor				Dimensions	WxDxH: 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm					
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Weight	Models		24Wh or 24Wh + 24Wh	· ' '		
	Number	Cores	Threads	Frequency	Frequency	3MB	Types	Graphics	1	Integrated I		3.49 lb / 1.58 kg	3.92 lb / 1.		
	i5-7200U	2	4	2.5 GHz	3.1 GHz		DDR4-2133	Intel HD Graphics 620		Integrated F		3.63 lb / 1.65 kg	4.08 lb / 1.8		
	i5-7300U			2.6 GHz	3.5 GHz	3MB		020	-	Discrete Ma		3.53 lb / 1.60 kg 3.68 lb / 1.67 kg	3.97 lb / 1.8 4.12 lb / 1.8		
				ore i3 / i5 / i		or		_	Case color	Black	3	3.00 ID / 1.07 kg	4.1210/1.0	57 Kg	
	Processor Number i3-8130U	# of Cores	# of Threads 4	Base Frequency 2.2 GHz	Max Turbo Frequency 3.4 GHz	Cache 4MB	Memory Types	Processor Graphics	Case material	Display cover: Magnesium Hybrid or PPS; Bottom: Glass-Fiber Reinforced Plastic					
	i5-8250U i5-8350U i7-8550U i7-8650U	4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620	Smart card reade Media reader Ports	4-in-1 read Two USB 3 one USB 3	d DisplayPort), D and DP),				
	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory (discrete graphics is available only on i7 models in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)								Monitor cable (optional)	optional) USB-C to DP: Lenovo USB-C to DisplayPort Adapter				,	
Chipset Memory	32GB max	x / 2400	DMHz DE	ip) platform DR4, dual-cocessors with	channel cap			O-DIMM sockets	Camera (optional) - Audio support	amera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus udio support HD Audio, Realtek® ALC3287 codec /					
Display	Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,					,	radio oupport	stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack							
	Some: 1	250 nit 14.0" (3	s, 16:9 a 355mm) \	spect ratio WQHD (25)	, 700:1 con 60x1440), a	träst ra anti-gla	atio, 170° vie ire, LED bac	wing angle klight, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
Multi-touch (opt)	1	170° vie	wing an				tio, 72% gar	nut,	Security Security chip vPro (optional)	ecurity chip Discrete TPM 2.0, TCG Certified					
Storage	System has	one HD	DD slot or ATA 6.0G	one M.2 228 Bb/s. 2.5" w	30 slot exclus	sively for		ion System™ SD)	Fingerprint reader <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard beze anti-spoofing technology NFC (optional) Near Field Communication					oard bezel,	
	Some: M Some: 12	I.2 SSD 28GB N) / PCle	NVMe, PCI / PCIe NVI	e 3.0 x 4 Me, PCle 3	.0 x 2,			Battery	Optional integrated Li-ion 24Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery					
Optane™ memory	* Installed Intel Opta	N.2 SSD	is PCIe 3	3.0 x 4 but rū	n at PCIe 3.	0 x 2 du	sive with WV e to M.2 SSD	VAIN adapter limitation	Max battery life (MobileMark® 2014)	miogratou	7.2 h	nr 14.4 hr 21.8 hr	Vh + 24Wh 24Wh + 48V 14.4 hr 21.8 hr	29.0 hr	
Optical	None .		-						1	* Pottery life			13.6 hr 19.8 hr	26.4 hr	
Ethernet	Non-vPro vPro mode						acksonville) Jacksonville)	AC adapter	45W or 65	W USB Typ	ificantly with settings, usag			
WLAN +								h 4.1, M.2 card				10 Home 64 or Window	s 10 Pro 64		
Bluetooth™ (opt) WWAN (optional)							Nindows OS re with Intel O	ptane memory):	Limited warranty (optional)	 One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service 					
, ,	WirelessIntegrate Intel XM	WAN ∈ ed Mob M™ 720	upgradal ile Broad 62 (Fibod		TE, EB), M.2 ca			, , , ,							
	Intel XM	M™ 73	60 (Fibod	com L850-0	GL). M.2 ca	rd	un avo doble		Mil-Spec test MIL-STD-810G military testing						
SIM card (opt)									Environment	t EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant					



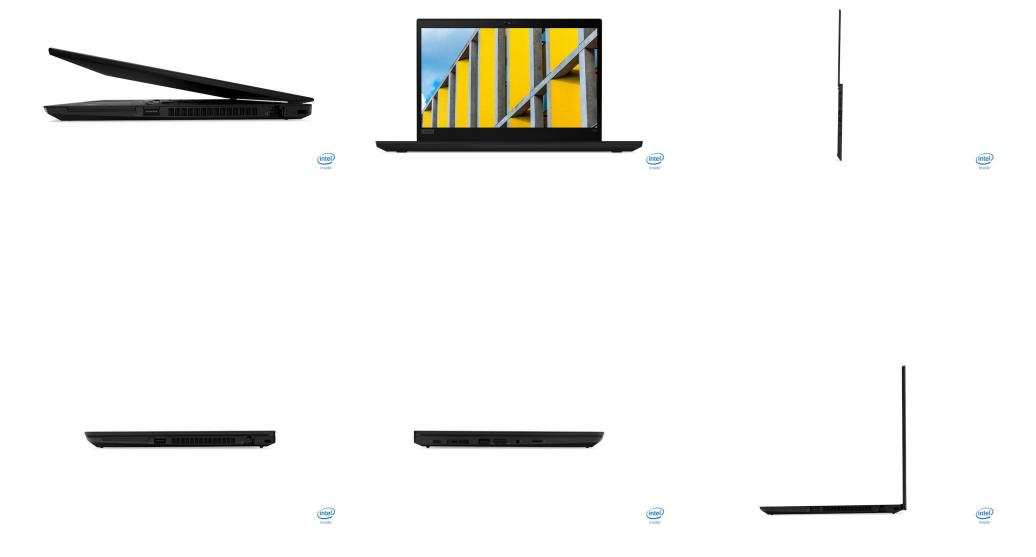
ThinkPad T480s Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions	<i>WxDxH:</i> 13.03" x 8.93" x 0.73"; 331mm x 226.8mm x 18.45mm					
	Processor # of # of Base Max Turbo Cache Memory Processor		Starting at 2.9 lb / 1.32 kg Black or Silver					
	Number Cores Inreads Frequency Frequency Types Graphics	Case material	Display cover: CFRP Hybrid;					
	i5-7200U 2 4 2.5 GHz 3.1 GHz 3MB DDR4-2133 Intel HD Graphics 620 620		Bottom: Magnesium					
	or 8th Generation Intel Core i5 / i7 Processor		Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)					
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Types Memory Types Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),					
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 4.		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole					
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory (discrete models are NOT available in EMEA);	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter					
	supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)		One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus					
Chipset Memory	Intel SoC (System on Chip) platform 20GB or 24GB max / 2400MHz DDR4, dual-channel capable, 4GB or 8GB memory soldered to systemboard, one DDR4 SO-DIMM socket	Audio support	The carriera and nD/zop carriera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack					
Diamin	* System clocks down for processors with lower memory controller	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
Display	Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle, supports ThinkPad Privacy Guard on some models Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology					
Multi-touch (opt)	On-cell touch, supports 10-finger gesture, 250 nits (FHD only)	NFC (optional)	Near Field Communication					
Storage	One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s		Integrated Li-ion 57Wh battery, supports Rapid Charge (0-80% in 60 mins) with 65W USB Type-C AC adapter					
Optical	M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s None		MobileMark® 2014: 15.6 hr *Battery life varies significantly with settings, usage, & other factors					
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)	AC adapter	45W or 65W USB Type-C AC adapter					
	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	,	Optional: Windows® 10 Home 64 or Windows 10 Pro 64					
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	, , , ,	One of the following, configurable by model: 1-year depot repair service					
WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE,		 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 					
	Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)	Mil-Spec test	MIL-STD-810G military testing					
SIM card (opt)	 Integrated Mobile Broadband 4G LTÉ-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card 	Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant					
	ations above may not be available in all regions	I	Lenovo					



ThinkPad T490 Platform Specifications

Processor	8th Gener	ation In	ntel® Cor	e™ i5 / i7	Processor					Dimensions	imensions							
	Processor	# of	# of	Base	Max Turbo		Memory	Proces	ssor	Weight	Models	HD	FHD	FHD Low Power / WQHD	Privacy Guard			
	Number	Cores	Threads	Frequency	Frequency	Cache	Types	Graph	nics		Weight	3.37 lb / 1.53	kg 3.41 lb / 1.55 kg	3.23 lb / 1.46 kg	3.56 lb / 1.61 kg			
	i5-8265U	-		1.6 GHz		6MB				Case color Case material	Black Display cover: PPS / 50% GF;							
	i5-8365U i7-8565U	4	8	1.6 GHz 1.8 GHz		6MB 8MB	DDR4-2400	Intel UHD 620		Case material	Bottom:	PA / 50						
	i7-8565U	1		1.9 GHz		8MB		020	,	Smart card reade								
		eneratio	on Intel (Processor (N		vailable in I	EMEA)		Media reader	MicroSD	card reader						
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Proce Grapl		Ports	one USE	3 3.1 Type-C`G	ne Always On), ien 1 (with the fund	ction of Power Delivery a	nd DisplayPort),			
	Number i5-10210U		Threads	Frequency 1.6 GHz	 	6MB	Types				one USE	3 3.1 Type-C G 4b Ethernet (F	ien 2 / Thunderbolt 3 I-45) _nano-SIM	3 (with the function of P card slot (WWAN models	D and DP),			
	i7-10510U	4	8	1.8 GHz		8MB	DDR4-2400	Intel UHD	Graphics		headpho	ne / micropho	ne combo jack, opt	tional smart card reader,				
Graphics	Intel UHD NVIDIA® C supports e supports t	Graphi GeForce external hree in	ics 620 d e® MX25 I digital r depende	r Intel UF 0, 2GB G nonitor via nt display		n proc y; underl	essor and polt;			microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed (optional) (optional) Monitor cable (Optional) USB-C to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to HDMI: Lenovo USB-C to HDMI Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter								
					(Thunderbolt); 409	96x2160@2	24Hz (HDI	MI)	Bundled Accy	None							
Chipset Memory	Intel SoC	(Syster	n on Chi MHz DI	p) platforr)R4_dual:	n channel capa	ıhle				Camera (optional				ora privacy fixed feets				
	8GB or 16	GB me	mory so	Idered to	systemboard, but run at 2400	one [ket	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed for HD Audio, Realtek® ALC3287 codec / 				cy, fixed focus			
Display	Size Reso	lution	T	pe Surfac	e Brightness	Aspe Ratio			Viewing Angle]			2, Dolby [®] Audio™ field microphone, h	Premium / neadphone / microphone	combo jack			
	14.0" HD (1	1366x76	8)	N Anti-gla		16:9		45%	90°	Keyboard UltraNav™				optional LED backlight s Mylar surface multi-tou	ch touchnad			
	14.0" FHD	(1920x1	080) I	PS Anti-gla	250 nits (non-touch) 300 nits (multi-touch	16:9	700:1	45%	170°	Security Security chip System Mgt (opt)	Power-or	n password, ha	ard disk password,	supervisor password, se	<u>'</u>			
	14.0" FHD Low F	(1920x1 Power	080)	PS Anti-gla	re 400 nits	16:9	800:1	72%	170°	Fingerprint reade NFC (optional)	r Optional	: Touch style i		erprint reader on the palr	n rest			
	14.0" FHD Guard		080) vacy I	PS Anti-gla	are 400 nits	16:9	1000:1	72%	170°	Battery	Integrate with 65W	ed Li-ion 50Wh V AC adapter	battery, supports	Rapid Charge (charge up	o to 80% in 1hr)			
		ID (2560 , Dolby \		PS Gloss	y 500 nits	16:9	1500:1	100% Adobe	170°	Max battery life AC adapter	* Battery		icantly with settings, ι	usage, & other factors				
Multi-touch (opt)	On-cell to	uch, su	pports 1	0-finger g	esture (FHD o	nly)				AC adapter 45W, 65W, or 65W slim USB-C AC adapter Operating system • Windows® 10 Home 64								
Storage	• M.2 228	0 SSD	/ PCIe N	IVMe, PC		in EM	IEA)			(optional) • Windows 10 Pro 64 • Windows 10 Pro in S mode								
	 M.2 224 Intel Option M.2 228 	tane™ I	Memory	H10 with	e 3.0 x 2 Solid State Si	orage),			Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service							
Optical	None]			ear system board r epot repair service	epair service				
Ethernet	Non-vPro vPro mode				nnection I219 nnection I219			e)			• 1-year	+ 2-year/1-yr b	pattery limited onsite service					
WLAN +	One of the						-11- 5.0			Mil-Spec test	MIL-STD	0-810G military	y testing					
Bluetooth™ (optional)	 Intel Wi-l 	Fi 6 AX	201, Wi-		802.11ac + E 2.11ax + Blue nly)					Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant							
WWAN (optional) SIM card (opt)	 Wireless Integrate Integrate Integrate * For non-W Nano-SIM 	s WAN used Mobiled Mob	upgrada ile Broad ile Broad ile Broad nodel, it m lot, optic	ble (special band 4G band 4G band 4G eans the m	al bid only in E LTE, Fibocom LTE-A, Fiboco LTE-A, Fiboco odel is NOT W n LTE (US) S	n L830 om L8 om L8 <i>WAN u</i>	Ĵ-EB, M.2 ca 50-GL, M.2 60-GL, MIN pgradable	card							Longy			



ThinkPad T490 Secure Access / Healthcare Edition Platform Specifications

Processor	8th Gene	eration Ir	ntel® Cor	e™ i5 / i7	Processor					Dimensions	WxDxH:	12.95" x 8.94" x 0.70";	329mm x 227mm x 17.9mm		
	Processo Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proces Graph		Weight	Models Weight	FHD 3.41 lb / 1.55 kg	Privacy Guard 3.56 lb / 1.61 kg		
	i5-8265U i5-8365U i7-8565U i7-8665U	4	8	1.6 GHz 1.6 GHz 1.8 GHz 1.9 GHz	4.1 GHz 4.6 GHz	6MB 6MB 8MB 8MB	DDR4-2400	ntel UHD (620		Case color Case material	Black Display co	over: PPS / 50% GF;		·);	
	Intel UHI NVIDIA® supports supports Max reso	D Graph GeForce externa three in olution:	nics 620 i ce® MX25 al digital i ndepende 4096x23	monitor via ent display 04@60Hz	or and DDR5 memor HDMI or Thu s; (Thunderbolt	inderb	•	4Hz (HDN	ИI)	Smart card reade RFID reader Media reader Ports	None RFID reader supporting RFID / NFC MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPo one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),				
Chipset Memory	Intel SoC (System on Chip) platform 48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation									Monitor cable	headphor side dock * Dependin	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN model), headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Display	Size Res	solution	Т	ype Surfac	-	Aspec Ratio			Viewing Angle	(optional)	USB-C to	o VGA Adapter o HDMI Adapter			
	14.0" FHI	D (1920x ⁻	1080) I	PS Anti-gla	300 11115	16:9	700:1	45%	170°	Bundled Accy	None	DP: Lenovo USB-C to following, configurable by m	, , ,		
	14.0" FHI		1080) ivacy I	PS Anti-gla	(multi-touch) re 400 nits	16:9	1000:1	72%	170°	Audio support	 HD720p IR came HD Audio 	camera with ThinkShut era and HD720p camera . Realtek® ALC3287 cod	ter camera privacy, fixed focus with ThinkShutter camera privacy, fixed foc ec /	cus	
					esture (FHD o	nly)					stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack				
		280 SSD	/ PCIe N	6.0Gb/s NVMe, PC NVMe, PC						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology rFIPS 201 fingerprint reader on palm rest NFC support via RFID reader			ad	
	• Intel O M.2 22 None Non-vPr	ptane™ 280, PCI o model	Memory e NVMe	H10 with 3.0 x 4	Solid State St	-V (Ja	cksonville)			Security Security chip System Mgt (opt) Fingerprint reade NFC				nole	
WLAN (optional) Bluetooth™ (opt) WWAN (optional)	Bluetoot	eless-AC h 5.0 wir	C 9560, V reless, in	Vi-Fi 2x2 8 tegrated i	nnection I219- 02.11ac + Blue wi-Fi + Blue del:	etooth	า 5.0			Battery Max battery life AC adapter	MobileMa * Battery li	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in MobileMark® 2014: 16.11 hr *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter			
, , ,	WirelesIntegra	ss WAN ited Mob	upgrada ile Broad	ble (special dband 4G	al bid only) LTE-A, Fiboco odel is NOT W			card		Operating system Limited warranty	n <i>Optional:</i> Windows® 10 Pro 64				
										Mil-Spec test		810G military testing			
										Environment	EPEAT™	Silver; ENERGY STAR®	7.1; RoHS-compliant		



ThinkPad T490s Platform Specifications

Processor	8th Genera	ation Ir	ntel® Coi	e™ i5 / i	Processo	r					Dimensions	WxDxH (l		/ Privacy Guard):		
	Processor Number	# of Cores	# of Threads	Base Frequen		ncy Cacr	ne Ty	emory ypes	Proces Graph			WxDxH (£	black with FHD	x 8.90" x 0.66"; 329.0mm x 2 Low Power / WQHD): x 8.89" x 0.63"; 328.8mm x 2		
	i5-8265U i5-8365U i7-8565U	4	8	1.6 GH 1.6 GH 1.8 GH	4.1 Gl	lz 6MI	B	4-2400	Intel UHD G 620	Graphics	Weight	WxDxH (s		x 8.92" x 0.68"; 329.15mm x		
	i7-8665U			1.9 GH								Weight	2.98 lb / 1.35 kg	/ WQHD / Privacy Guard 2.81 lb / 1.27 kg	3.29 lb / 1.49 kg	
Graphics	Intel UHD supports e supports the Max resolu	externa hree in	ıl digital ı ıdepende	mönitor v ent displa	ia ĤDMI c lys;			160@2	4Hz (HDM	11)	Case color Case material Smart card reade	Bottom:	over: CFRP Hy Magnesiu			
Chipset Memory	Intel SoC (8GB, 16GI * Installed n	À ór 32	GR / 24	οιώμε τ	DR4 / sol	dered to 2400MH	system z due to	nboard, Intel lim	no socket	s	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Display				
Display	Size Resolution Type Surface Brightness Aspect Contrast Color Ratio Gamut											HDMI 1.4	b, Ethernet exte	n 2 / Thunderbolt 3 (with the fuension connector, nano-SIM c	ard slot (WWAN models	
	14.0" FHD	`	·	IPS Anti	glare (non	0 nits -touch) 0 nits i-touch)	16:9	700:1	45%	170°	Monitor cable	microSD o * Dependin HDMI to \	card reader, siden on many factors VGA: Lenovo	e combo jack, optional smart of e docking connector, security s, actual data transfer speed may HDMI to VGA Monitor Adapte	keyhole be lower than theoretical sp	
	14.0" FHD Low F	(1920x1 Power	1080)	IPS Anti	glare 40	0 nits	16:9	800:1	72%	170°	(optional) Bundled Accy	USB-C to	DP: Lenovo	USB-C to VGA Adapter USB-C to DisplayPort Adapter rnet Extension Adapter Gen 2	er o	
	14.0" FHD Think Guard		1080) vacy	IPS Anti-	glare 40	0 nits	16:9	1000:1	72%	170°	Camera	One of the	following, configu	<u> </u>		
	14.0" WQH HDR,	D (2560 Dolby \	0x1440) Vision™	IPS Glo	ssy 50	0 nits	16:9	1500:1	100% Adobe	170°	Audio support	IR came HD Audio	era and HD720p , Realtek® ALC3	o camera with ThinkShutter ca 3287 codec /		
Multi-touch (opt)			• • • • • • • • • • • • • • • • • • • •		gesture (F	HD only	')							Dolby® Audio™ Premium / Id microphone, headphone / r	nicrophone combo jack	
Storage	M.2 228M.2 228M.2 224	0 SSD	/ PCIe I	VMe, P	Cle 3.0 x 4 Cle 3.0 x 2						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpa				
Optical	 Intel Opt M.2 228 None 	tane™	Memory	H ₁₀ wit			ıge,				Security Security chip System Mgt (opt)	Discrete T	ГРМ 2.0. TCG C	d disk password, supervisor p Certified	assword, security keyho	
Ethernet	Native Inte										Fingerprint reader NFC (optional)	r Optional:	Touch style mad Communication	atch on chip fingerprint reader on	on the palm rest	
WLAN + Bluetooth™ (optional)	One of the i	following eless-A Fi 6 AX	g, configu AC 9560, (200, Wi	rable by r Wi-Fi 2x -Fi 2x2 8	odel: 2 802.11a 02.11ax +	c + Blue	tooth 5				Max battery life AC adapter	with 65W MobileMa * Battery li	AC adapter ark® 2014: 20 h ife varies significal	attery, supports Rapid Chargo or ntly with settings, usage, & other JSB-C AC adapter		
WWAN (optional)	 Wireless 	WAN	upgrada	ble									·	Home 64 or Windows 10 Pro	64	
SIM card (opt)	 Integrate Integrate * For non-W Nano-SIM 	ed Mob /WAN n	ile Broa nodel, it n	dband 40 neans the	i LTE-A, F model is No	ibocom <i>T WWAI</i>	L850-G V upgrad	L, M.2	rd (EMEA card	only)	Limited warranty	One of the 1-year of 1-year of 3-year/1	following, configu depot repair serv depot with 2-yea 1-yr battery depo	rable by model:		
											Mil-Spec test		-810G military te			
											Environment	EPEAT™	Gold; ENERGY	STAR® 7.1; RoHS-compliant		



ThinkPad T495 Platform Specifications

Processor	AMD Ryz	en™ PF	RO Mobil	le Pro	ocessor	s with Ra	deon™ Ve	ga Graphics	3		Dimensions	WxDxH:	12.95" x 8.9	94" x 0.70"; 32	29mm :	x 227mm x 17.9mm
	Processor	# of	# of			Max Turbo	Cache	Memory	Proce		Weight	Models	HD	FHD)	FHD Low Power
	Number	Cores	Threads	Freq	quency F	requency		Controller	Grap			Weight	3.46 lb / 1.57	kg 3.46 lb / 1.	.57 kg	3.39 lb / 1.54 kg
	Ryzen 3 Pro 3300U	4	4	2.1	GHz	3.5 GHz	2MB L2 / 4MB L3		Radeon Grap	hics	Case color Case material		over: PPS/5			
	Ryzen 5 Pro 3500U	4	8	2.1	GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Grap	hics	Smart card reade	Bottom: r Optional:	PA / 50° Smart card re			
	Ryzen 7 Pro 3700U	4	8	2.3	GHz	4.0 GHz	2MB L2 / 4MB L3		Radeon Grap	Vega 10 hics	Media reader Ports	MicroSD One USB	card reader 3.1 Gen 1 (A	lways On), one		
Graphics	AMD Rad supports t supports t Max resol	externation of the contract of	aľ digital depende	moni	itor via (splavs;	JSB-C or	HDMI;	orocessor; 60@60Hz (F	HDMI)			HDMI 2.0 headphor microSD	, Ethernet (Rune / microphor card reader, s	J-45), nano-SIM ne combo jack, ide docking cor	I card so optional option	of Power Delivery and DisplayPort), slot (WWAN models), al smart card reader, r, security keyhole speed may be lower than theoretical speed
Chipset Memory		x / 240 SGB m	00MHz D emory s	DR4 older	, dual-cl red to sy	hannel ca ⁄stemboa	rd, one D	DR4 SO-DI		ĸet	Monitor cable (optional) Bundled Accy	HDİMI to	<i>VGA:</i> Lenov VGA: Lenov	vo HDMI to VGA vo USB-C to VGA vo USB-C to Dis	A Monit AA Ada	or Adapter pter
Display	Size Reso	olution	-	Туре	Surface	Brightne	ss Aspe	Contrast Ratio	Color Gamut	Viewing Angle	Camera (optional)					privacy, fixed focus
	14.0" HD (1366x7	68)	TN /	Anti-glare	220 nit	s 16:9	400:1	45%	90°	Audia aummart				Thinks	Shutter camera privacy, fixed focus
	14.0" FHD	(1920x	(1080)	IPS	Anti-glare	300 1111	ch) s 16:9	700:1	45%	170°	Audio support	stereo sp optional c	eakers, 2W x lual array far-f		e, head	dphone / microphone combo jack
	14.0" FHD	(1920x Power	(1080)	IPS /	Anti-glare	(multi-tou 400 nit	- /	800:1	72%	170°	Keyboard UltraNav™					ional LED backlight ylar surface multi-touch touchpad
Multi-touch (opt)	On-cell to		upports '	10-fir	nger ges	ture (FHI) only)		l		Security				ord, sup	pervisor password, security keyhole
Storage	M.2 228M.2 228M.2 224	80 SSE) / SATA) / PCle	6.0G NVM	ab/s le, PCle	3.0 x 4	,				Security chip System Mgt Fingerprint reade NFC	DASH Ma	TPM 2.0, TCG anagement Touch style n		ngerpr	int reader on the palm rest
Optical	None										Battery			battery, suppor	rts Rap	oid Charge (charge up to 80% in 1hr)
Ethernet	Realtek® I						n				Marria attami lifa		AC adapter) 4 has		
WLAN	 One of the Realtek Intel Wir 	BTL8	822BE,	Wi-F	i 2x2 80	2.11ac +		h 4.2, M.2 ca	ard		Max battery life AC adapter	* Battery I	ark® <i>2014:</i> 13 ife varies signific 5W USB Type		gs, usag	e, & other factors
Bluetooth™								etooth combo	adapte	r	Operating system	Optional:	Windows® 10	Home 64 or W	/indows	s 10 Pro 64
WWAN (optional) SIM card (opt)	One of the • Wireless	following S WAN ed Mot WWAN	ng, configu upgrada bile Broa model, it r	urable able adban	by mode and 4G LT s the mode	el: ΓE-A, Fibα del is NOT	ocom L8	50-GL, M.2 o	•		Limited warranty (optional)	One of the 1-year d 3-year/1	following, configered to following, configered	gurable by model	: ce nsite se	
											Mil-Spec test	MIL-STD-	-810G military	testing		
											Environment	EPEAT™	Silver; ENER	GY STAR® 7.1;	RoHS-	compliant

Note: The specifications above may not be available in all regions.

Lenovo December 2019



ThinkPad T495s Platform Specifications

Processor	AMD R	Ryzer	n™ PRO N	Mobile I	Processo	rs with Rac	deon™ Ve	ga Graphics	 S		Dimensions	WxDxH (I	FHD / Privacy Gua	ard):	
	Process Number	sor	# of #	of	Base	Max Turbo Frequency	Cache	Memory Controller	Proce Grap				12.95" x 8 Low Power):	3.90" x 0.66"; 329.0mm x 2	26.15mm x 16.7mm
	Ryzen 5 Pro 350	5	4 8		2.1 GHz	27047	2MB L2 / 4MB L3		Radeon Grap	Vega 8	 Weight	Models	12.94" x 8	3.89" x 0.63"; 328.8mm x 2	25.8mm x 16.1mm FHD Privacy Guard
	Ryzen 7	7	4 8	8 2	2.3 GHz	4.0.011=	2MB L2 /	DDR4-2400	Radeon \	/ega 10		Weight	2.92 lb / 1.33 kg	2.76 lb / 1.25 kg	2.89 lb / 1.31 kg
	Pro 370						4MB L3		Grap	nics	Case color Case material	Black Display c	over: CFRP Hybr	id;	
Graphics	suppor	ts ex	ternal dig	gital mo	ga 10 Gra onitor via t displays	aphics in p USB-C or	rocessoi HDMI;	;			Smart card reade	Bottom:	Magnesium		
	Max re	solut	ion: 409	6x230	1@60Hz	, (USB-C);	4096x21	60@24Hz (H	HDMI)		Media reader	MicroSD	card reader		
Chipset Memory	8GB or	16Ġ	iB / 2400)MHz Ċ	o) platforn DR4 / so 2666MHz b	Idered to s	ystembo 00MHz di	ard, no sock ue to AMD lim	cets itation		Ports	two USB HDMI 2.0	3.1 Type-C Gen 2), Ethernet extensi	s On), one USB 3.1 Gen 2, (with the function of Power I on connector, nano-SIM car ombo jack, optional smart ca	d slot (WWAN models),
Display	Size R	esolu	tion	Тур	e Surface	Brightnes	ss Aspec		Color Gamut	Viewing Angle	Monitor cable	microSD * Depending	card reader, side (docking connector, security lactual data transfer speed may b DMI to VGA Monitor Adapter	keyhole be lower than theoretical speed
	14.0" FI	HD (1	920x1080	D) IPS	S Anti-glai	re 250 nits (non-touc 300 nits (multi-touc	^(h) 16:9	700:1	45%	170°	(optional) Bundled Accy	USB-C to Optional:	VGA: Lenovo U ThinkPad Ethern	SB-C to VGA Adapter et Extension Adapter Gen 2	
	14.0" Fi	HD (1	920x1080	D) IPS	6 Anti-gla	1		800:1	72%	170°	Camera	• HD720p		ole by model: nkShutter camera privacy, fix amera with ThinkShutter car	
	14.0" Th		920x1080 ad Privacy	y IPS	S Anti-glai	re 400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	o, Realtek® ALC32 eakers, 1W x 2, D		, ,,
						sture (FHD	only)				Keyboard	6-row, spi	ill-resistant, multin	nedia Fn keys, optional LED	backlight
Storage Optical	M.2 228 None	80 S	SD / PCI	le NVN	le, PCle 3	3.0 x 4					UltraNav™ Security		1 0	and buttonless Mylar surfactisk password, supervisor pa	<u> </u>
Ethernet	Realtek	ĸ® R1	ΓL8111E	PV Gig	abit Ethe	rnet conne	ection				Security chip	Discrete 7	TPM 2.0, TCG Cer		soword, became negricie
WLAN <i>(optional)</i> Bluetooth™	Bluetoc	oth 5	.0 wireles	ss, inte	grated in			n 5.0 combo adapt	ter		System Mgt Fingerprint reader NFC		anagement Touch style matc	h on chip fingerprint reader o	on the palm rest
WWAN (optional)	 Wirele 	ess V	ogu NAN	aradabl	ble by mod e						Battery		d Li-ion 57Wh batt	ery, supports Rapid Charge	(charge up to 80% in 1hr)
SIM card (opt)	* For no	n-WV	VAN mode	el, it mea	ans the mo	I E-A, FIDO odel is NOT I I LTE (US)	WWAN up		ard		Max battery life AC adapter	MobileMa * Battery I	ark® 2014: 16.4 h	y with settings, usage, & other fa	nctors
											Operating system	Optional:	Windows® 10 Ho	me 64 or Windows 10 Pro 64	4
											Limited warranty		following, configural		
												 3-year/1 	depot repair servic 1-yr battery depot 1-yr battery limited	repair service	
											Mil-Spec test		-810G military test		
											Environment	EPEAT™	Silver; ENERGY S	STAR® 7.1; RoHS-compliant	
Note: The specifica	tions ab	OVE T	may not h	ne availa	able in all	regions									Lenov







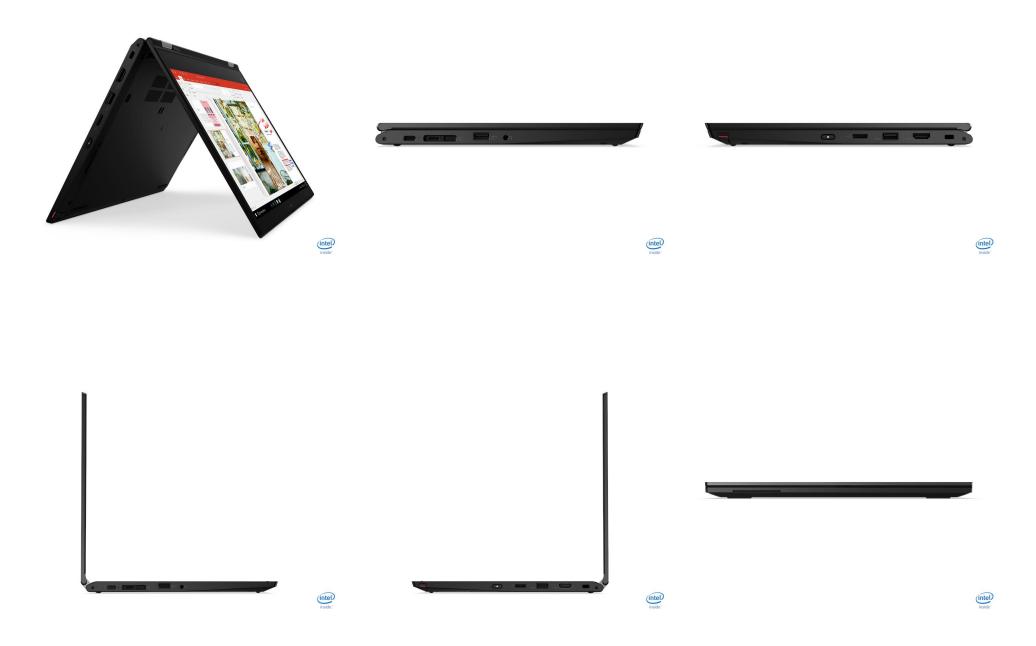
ThinkPad T580 Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor # of # of Base Max Turbo Cache Memory Processor	Weight Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg
	Number Cores Threads Frequency Frequency Types Graphics i5-7200U 2 4 2.5 GHz 3.1 GHz 3MB DDR4 2123 Intel HD Graphics	Case color Black
	i5-7300U	Case material Display cover: GFRP + PPS; Bottom: GFRP
	or 8th Generation Intel Core i5 / i7 Processor	Smart card reader Optional: Smart card reader
	Processor # of Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Media reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Two USB 3.1 Gen 1 (one Always On),
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB DDR4-2400 Intel UHD Graphics 620	headphone / microphone combo jack, optional smart card reader,
Graphics	1.9 GHz 4.2 GHz 8MB Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or	4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed Monitor cable HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory;	(optional) USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	supports external digital monitor via HDMI or USÉ Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * System clocks down for processors with lower memory controller	Audio support HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle	Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi touch (ant)	Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 72% gamut, 170° viewing angle	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Multi-touch (opt) Storage	On-cell touch, supports 10-finger gesture (FHD only) System has one HDD slot or one M.2 2280 slot exclusively for storage	vPro <i>(optional)</i> Intel vPro Technology Fingerprint reader <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest,
Storage	Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD)	anti-spoofing technology NFC (optional) Near Field Communication
	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s.	Battery Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery
	in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2	Max battery life (MobileMark® 2014) Max battery life 5.8 hr 12.5 hr 18.1 hr 13.8 hr 20.3 hr 26.1 hr
Optical	None	* Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	AC adapter 45W or 65W USB Type-C AC adapter
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model:
	One of the following, configurable by model: • Wireless WAN upgradable (special bid only) • Integrated Mobile Broadband 4G LTE.	 (optional) 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A,	Mil-Spec test MIL-STD-810G military testing
SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card	Environment EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
Note: The enecified	tions above may not be available in all regions	Lenove



ThinkPad T590 Platform Specifications

Processor	8th Generation	Intel® Co	re™ i5 / i7 P	rocessor					Dimensions	<i>WxDxH:</i> 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
		# of S Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proce Grap		Weight Case color Case material	FHD model: 3.87 lb / 1.75 kg; UHD model: 3.86 lb / 1.75 kg Black Display cover: PPS / 50% GF;
	i5-8265U i5-8365U i7-8565U i7-8665U	8	1.6 GHz 1.6 GHz 1.8 GHz 1.9 GHz	3.9 GHz 4.1 GHz 4.6 GHz 4.8 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD 62			PA / 50% GF rOptional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On).
Graphics Chipset Memory	Intel UHD Grap Intel UHD Grap NVIDIA® GeFo supports exterr supports three Max resolution Intel SoC (Syst 48GB max / 24 8GB or 16GB r	phics 620 rce® MX2 nal digital independ 4096x23 em on Ch 00MHz D nemory s	in processo 50, 2GB GE monitor via ent displays 804@60Hz ip) platform DR4, dual-c oldered to s	r and DR5 mem HDMI or TI ; (Thunderbo	nunderk olt); 409 oable, d, one [96x2160@2 DDR4 SO-E	DIMM soci		- Monitor cable (optional) Bundled Accy	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter (NOT available in EMEA) None
Display	* Installed memo		Type Surfac		Acno	ct Contras	t Color	Viewing Angle) One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	15.6" FHD (1920	· · · · · · · · · · · · · · · · · · ·	IPS Anti-gla	+			45% 100%	170°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack
Multi-touch (opt)	15.6" UHD (3840 HDR, Dolb On-cell touch, s	y vision	IPS Anti-gla			1200:1	Adobe	170°	Keyboard UltraNay™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	 M.2 2280 SS M.2 2280 SS M.2 2242 SS Intel Optane^T M.2 2280. PO 	D / SATA D / PCle D / PCle M Memory	6.0Gb/s NVMe, PCle NVMe, PCle H10 with S	9 3.0 x 4 9 3.0 x 2		,			Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Optical	None								Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet	Non-vPro model:		thernet Con thernet Con				e)		Max battery life	with 65W AC adapter MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics)
WLAN (optional) Bluetooth™	Intel Wireless-A Bluetooth 5.0 v						pter		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WWAN (optional)	One of the follow	ing, configi	rable by mod	lel:					· · · · · · · · · · · · · · · · · · ·	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card	 Wireless WAI Integrated Mo Integrated Mo * For non-WWAN Nano-SIM card 	bile Broa bile Broa <i>model, it i</i>	dband 4G L dband 4G L neans the mo	TE, Fibóco TE-A, Fibo Idel is NOT V	m L830 com L8 VWAN u	-EB, M.2 ca 50-GL, M.2 ogradable	ard (EME <i>l</i> ! card	A only)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad L13 Yoga Platform Specifications

Graphics Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Intel UHD Graphics Intel UHD Grap	ne function of Power Delivery and DisplayPort), nector, headphone / microphone combo jack, D card reader, side docking connector, ta transfer speed may be lower than theoretical speed
Supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Monitor cable (optional) Lenovo USB-C to VGA Adapter (optional) Lenovo USB-C to HDMI Adapter (optional)	, ,
Max resolution: 4096x2304@60Hz (OSB Type-C); 4096x2160@30Hz (HDMI) • Lenovo HDMI to VGA Monitor Ad	lapter lapter
Chipset Intel SoC (System on Chip) platform Memory 4GB, 8GB, or 16GB / 2666MHz DDR4 / soldered to systemboard, no sockets Bundled Accessories Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2	r 2m
Display Size Resolution Type Surface Brightness Ratio Rati	apter Gen 2
13.3" FHD (1920x1080) IPS Antireflection 300 nits 16:9 800:1 72% 170° Camera One of the following, configurable by mo	er camera privacy, fixed focus
	udio™ Premium /
Storage One of the following, configurable by model: Keyboard 6-row, spill-resistant, multimedia Fn UltraNav™ TrackPoint® pointing device and but	n keys, optional LED backlight ttonless Mylar surface touchpad, multi-touch
 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 Optical Optical M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 Security Chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology Fingerprint reader Optional: Touch style fingerprint reader NFC None 	sword, supervisor password, security keyhole eader on the palm rest
Ethernet Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>), RJ45 connector via optional ThinkPad Ethernet Extension Adapter Gen 2 or Legyory LISB-C to Ethernet Adapter Integrated Li-ion 46Wh battery, sup with 65W AC adapter	oports Rapid Charge (charge up to 80% in 1hr)
WLAN + Bluetooth™ One of the following, configurable by model: • Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card	
• Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card WWAN None G-sensor Yes SIM card None Gyroscope None	
Dimensions WxDxH: 12.26" x 8.62" x 0.69"; 311.5mm x 219mm x 17.6mm Weight Starting at 3.17lb / 1.43kg Case color Black or Silver Operating system • Windows® 10 Home 64 (optional) • Windows 10 Pro 64 • Windows 10 Pro in S mode	
Case material Display cover: Magnesium / Aluminum GFRP Limited warranty (optional) 1-year depot repair service 1-year depot with 2-year system to 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service	ervice '
Mil-Spec test MIL-STD-810G military testing	
Environment EPEAT™ Silver; ENERGY STAR® 7 Note: The specifications above may not be available in all regions.	7.1; RoHS-compliant Lenovo

Note: The specifications above may not be available in all regions.

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ThinkPad L380 Yoga Platform Specifications

Processor	7th Genera	ation Ir	ntel® Core	e™ i3 / i5 P	rocessor				Dimensions	<i>WxDxH:</i> 12.67" x 8.82" x 0.74"; 322mm x 224.2mm x 18.8mm
	Processor	# of	# of		Max Turbo	Cache	Memory	Processor	Weight Case color	Starting at 3.44 lb / 1.56 kg Black or Silver
	Number i3-7020U	Cores	Threads	Frequency 2.3 GHz	Frequency	3MB	Types	Graphics	Case material	Display cover: Aluminum
	i3-7020U	2	4	2.3 GHz 2.7 GHz	-	3MB	DDR4-2133	Intel HD Graphics		Bottom: GFRP
	i5-71300	_	+	2.7 GHz	3.1 GHz	3MB	DDN4-2133	620	Smart card reade	
	8th Genera	ation Ir	ntel Core			OIVID		<u> </u>	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor		two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack,
	Number	Cores	1	Frequency			Types	Graphics		microSD card reader, security keyhole
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB				* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i5-8250U			1.6 GHz	3.4 GHz	6MB	DDR4-2400	Intel UHD Graphics	Monitor cable (optional)	HDMI to VGA: Lénovo HDMI to VGA Monitor Adaptér USB-C to VGA: Lenovo USB-C to VGA Adapter
	i5-8350U i7-8550U	4	8	1.7 GHz 1.8 GHz	3.6 GHz 4.0 GHz	6MB 8MB		620	(Optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Graphics		raphic	s 620 or		Graphics 6		ocessor:		Camera	720p: HD720p resolution, low light sensitive, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus
	supports e	externa	ıl digital n	nonitor via	HDMI or U					World facing: Rear camera, 5MP resolution, auto focus
	supports to Max resolu	hree in ution: 4	idepende 4096x23(nt displays 04@60Hz (; USB Type-	C); 40	96x2160@3	30Hz (HDMI)	Audio support	HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack
Chipset	Intel SoC						1-1-		Keyboard	6-row, multimedia Fn keys, optional LED backlight
Memory	two DDR4				dual-chanr	іеї сара	abie,		UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
					with lower	memo	ry controlle	er	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
Display					ED backligl				System Mgt (opt)	Intel vPro Technology
Multi-touch (opt)							igle, AR (an orts 10-finge	iti-reflection)	Fingerprint reade	r Optional: Touch style fingerprint reader on the keyboard bezel,
Hinge	Yoga hinge			ii, An (aiii	i-renection)	, supp	orts ro-inige	er gesture	NFC (optional)	anti-spoofing technology Near Field Communication
Convert-mode	Laptop, ter	nt, star	nd, yoga	and tablet					Battery	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Pen						splay, c	n-board ga	rage	Battery	with 65W USB Type-C AC adapter
Storage	One of the fM.2 SSE					۵/			Max battery life	MobileMark® 2014: 12.85 hrs
	• M.2 SSE) / PCI	e NVMe,	PCle 3.0 x	4, 32Gb/s	. <i>د)</i> (e.g. x	xxGB SSD	M.2 PCIe NVMe)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optical	None								Preload	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Native Inte						์ I219-LM (เ	(Pro))	Limited warranty	One of the following, configurable by model:
WLAN + Bluetooth™							+ Bluetoot	h 4.1, M.2 card		1-year depot repair service 1-year depot with 2-year system board service
WWAN		caru S	ωρρυπδ Ι	J 1 +.∠ DUL 18	s iii iiileu lu	D14.1	by WilliadWS	, 00	-	 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
SIM card	None None								Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant
										Lengto

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ThinkPad L390 Yoga Platform Specifications

Processor	8th Generation Intel® Core™ i3 / i5 / i7 Processor	Smart card readerNone
	Processor # of # of Base Max Turbo Cache Processor	Media reader MicroSD card reader Ports Two USB 3.1 Gen 1 (one Always On),
	Number Cores Threads Frequency Frequency Types Graphics i3-8145U 2 4 2.1 GHz 3.9 GHz 4MB	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	is 936511 4 9 1.6 GHz 3.0 GHz 6MB	HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole
	i5-8365U 4 8 1.6 GHz 4.1 GHz 6MB DDR4-2400 mtel 0HD Graphic	* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i7-8565U 4 8 1.8 GHz 4.6 GHz 8MB	Monitor cable • Lenovo USB-C to VGA Adapter
Graphics	Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Lenovo USB-C to VGA plus Power Adapter Lenovo USB-C to HDMI Adapter Lenovo USB-C to HDMI plus Power Adapter Lenovo USB-C to DisplayPort Adapter Lenovo USB-C to Ethernet Adapter Lenovo USB-C to Ethernet Adapter
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation	Accessories (optional) Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m
Display		Camera One of the following, configurable by model: • HD720p camera, fixed focus
Display	Size Resolution Type Surface Brightness Aspect Contrast Color Viewing Ratio Ratio Gamut Angle	• IR camera and HD720p camera, fixed focus (black model only)
	13 2" EHD (1920v1090) IBS Anti-	World facing camera, 5MP resolution, auto focus (mutually exclusive with fingerprint reader)
	reflection	□ Audio support HD Audio, Realtek ALC3287 codec /
Multi-touch	Capacitive-type multi-touch, supports 10-finger gesture, anti-reflection (AR), could reduce the brightness by up to 10%	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Hinge	Yoga hinge, 360 degree	Keyboard 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
Multi-mode Pen <i>(optional)</i>	Laptop, tent, stand and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board garage	UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Storage	One of the following, configurable by model: • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Intel Optane™ Memory H10 with Solid State Storage,	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology Fingerprint reader Optional: Touch style fingerprint reader on the palm rest (mutually exclusive with World facing camera)
	M.2 2280, PCle NVMe 3.0 x 4	NFC (optional) Near Field Communication
Optical	None	Battery Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via optional ThinkPad Ethernet Extension Cable or	Max battery life MobileMark® 2014: 12.17 hr
	Lenovo USB-C to Ethernet Adapter	* Battery life varies significantly with settings, usage, & other factors AC adapter 45W or 65W USB-C AC adapter
WLAN	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card	Operating system <i>Optional:</i> Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ WWAN	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Limited warranty One of the following, configurable by model:
SIM card	None None	1-year depot repair service 1-year depot with 0 years protein heard repair convice
Dimensions	WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm	 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service
Weight	Starting at 3.44 lbs / 1.56 kg	3-year/1-yr battery limited onsite service
Case color Case material	Black or Silver Display cover: Magnesium / Aluminum	Mil-Spec test MIL-STD-810G military testing
	Bottom: GFRP	Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Note: The specific	ations above may not be available in all regions.	Lenovo

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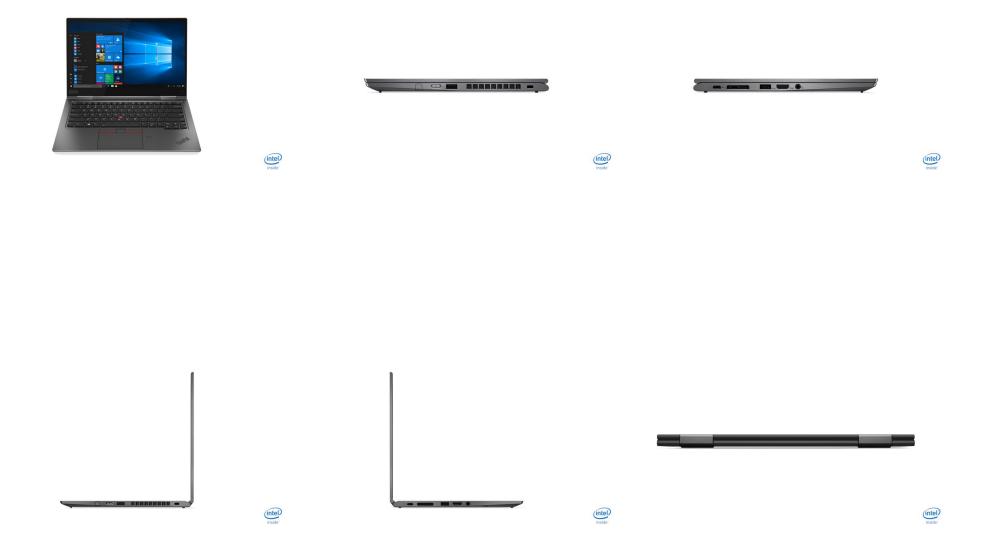






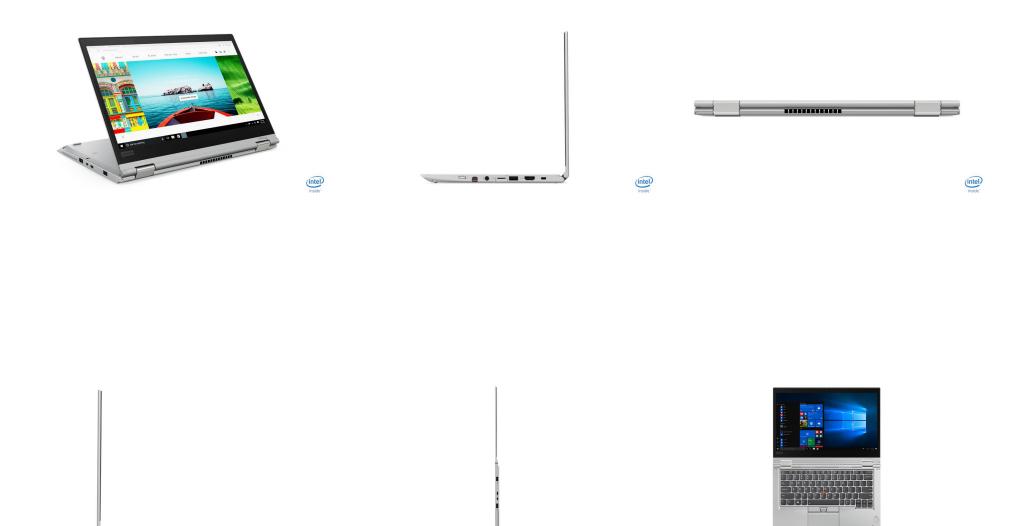
ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Smart card reade	rNone
	Processor # of # of Number Cores Threads Frequency Frequency Cache Memory Types Processor Graphics	Media reader Ports	MicroSD card reader, supports UHS-II Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (Power Delivery, DisplayPort, Data
	i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Graphics 620		transfer), HDMI 1.4, Ethernet extension connector, nano-SIM card slot (WWAN models),
	8th Generation Intel Core i5 / i7 Processor		headphone / microphone combo jack, microSD card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Processor # of # of Number Cores Threads Frequency Frequency	WiGig dock Monitor cable (optional)	None HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	1.7 GHz 3.6 GHz 6MB 1.7 GHz 1.7 GHz 1.8 GHz 4.0 GHz 8MB LPDDR3-2133 Intel UHD Graphics 620 1.8 GHz 4.0 GHz 8MB LPDDR3-2133 Graphics 620 1.8 GHz 1.8 GH		USB-C to DP: Lenovo USB-C to DisplayPort Adapter One of the following, configurable by model: 720p: HD720p camera with ThinkShutter camera privacy, fixed focus
			IR & 720p: IR camera and HD720p camera, fixed focus
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Audio support	* WWAN models and HDR panel models can not support IR camera HD Audio, Realtek® ALC3286 codec, Dolby® Audio™ Premium / stereo speakers, 1W x 2 /, 360° Noise-cancelling Dual Array Far Field, headphone / microphone combo jack
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Keyboard UltraNav™	6-row wave keyboard (rise & fall), spill-resistant, multimedia Fn keys, LED backlit TrackPoint® pointing device and 3+2 buttons multi-touch clickpad
Display	Some: 14.0" (355mm) FHD (1920x1080), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, IPS, AR (anti-reflection)	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology
	Some: 14.0" (355mm) WQHD (2560x1440), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle,	NFC <i>(optional)</i>	rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
	IPS, AR (anti-reflection) Some: 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, LED backlight, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio,	Battery Max battery life	Integrated Li-Ion 54Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 15.4 hrs
Multi-touch	100% gamut, 170° viewing angle, IPS, AR (anti-reflection) Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge),	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Hinge	supports 10-finger gesture, reduces overall display brightness by 10% Yoga hinge, 360 degree	Light sensor	Ambient Light Sensor
Pen (optional)	Laptop, tent, stand, and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	G-sensor Gyroscope GPS	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe)	Preload	Windows® 10 Pro 64
Optical	None	Limited warranty	One of the following, configurable by model:
Ethernet	Native Intel Ethernet Connection WGI219-LM (<i>vPro</i>) via optional ThinkPad Ethernet Extension Cable	(optional)	 1-year depot repair service 1-year depot with 2-year system board service 3-year/1-yr battery depot repair service
WLAN	One of the following, configurable by model: Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card		3-year/1-yr battery limited onsite service
Bluetooth™	 Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter 	Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR®; RoHS-compliant
WWAN (optional) SIM card (opt)	Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card		, <u></u>
Dimensions Weight Case color Case material	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb / 1.4kg Black or silver Display cover: Carbon-Fiber and Glass-Fiber hybrid;		
	Bottom: magnesium-PPS hybrid		Lenovo



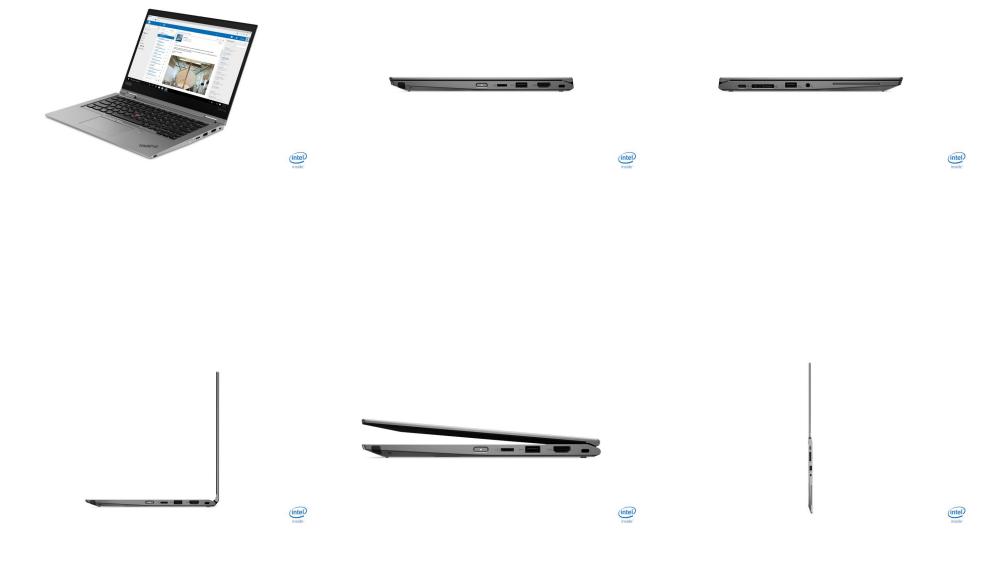
ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor	8th G			re™ i5 / i7 Pro	cessor					WWAN (optional)	One of the following, configurable by model:
	Proce Numb		# of Threads		lax Turbo requency Cacl	ne Mem	nory Types	Proce Grap	essor		 Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card
	i5-826	5U	11110000		3.9 GHz 6MI	3		- Grap	,,,,,,	SIM card (opt)	* For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-836	4	8		4.1 GHz 6MI 4.6 GHz 8MI	— II PI I	DR3-2133	Intel	UHD cs 620	Dimensions	WxDxH (Privacy Guard): 12.71" x 8.58" x 0.63"; 323mm x 218mm x 15.95mm
	i7-866				4.8 GHz 8MI	_		Старт	03 020	Weight	WxDxH (other model): 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24 lb / 1.47 kg;
	or 10	h Generat	ion Intel	Core i5 / i7 Pr	ocessor (NO	Γavaila	able in EM	1EA)			Other model: starting at 2.99 lb / 1.36 kg
	Proce Numb		# of Threads		Max Turbo Cac	he Men	nory Types	Proce	essor	Case color Case material	Display cover: Aluminium;
	i5-102		8		4.2 GHz 6M	В		Intel		Cmort cord roads	Bottom: Magnesium
	i7-105				4.9 GHz 8M	_	DR3-2133		ohics	Smart card reade Media reader	None
Graphics	i7-107		12		4.7 GHz 12M		~~.			Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b,
Graphics	suppo	rts externa	al digital	monitor via H	DMI or USB 1			rbolt;			Ethernet extension connector, nano-SIM card slot (WWAN models).
				ent displays; Iz (Thunderb	olt); 4K@24H	lz (HDI	MI)				headphone / microphone combo jack, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset	Intel S	SoC (Syste	m on Ch	ip) platform	•	,	· ·			Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Memory	8GB	or 16GB / 2	2133MHz	z LPDDR3 / s	oldered to sys						One of the following, configurable by model:
Display	Size	Resolution		pe Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0"	FHD (1920x Low Power	, IL	Anti-reflection		16:9	800:1	72%	170°	Audio support	HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 /
		FHD (1920x ThinkPad Pı Guard		Anti-reflection		16:9	1000:1	72%	170°	 Keyboard UltraNav™	four 360° far-field microphones, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0"	WQHD (2560x1440) IF	Anti-reflection	on e 300 nits	16:9	800:1	72%	170°	Security	Power-on password, hard disk password, supervisor password, security keyhole
	14.0"	UHD (3840) HDR 400, Dolby Visior	Í IF	Anti-reflection	500 nits	16:9	1400:1	90%	170°	Fingerprint rèadé	Discrete TPM 2.0, TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest
Multi-touch	Capa	citive-type	multi-tou	ch, supports	10-finger gest	ture,				NFC (optional)	Near Field Communication
	could	reduce the	e brightn	(anti-smudge) ess by up to 1	0%					Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Hinge Convert-mode	Yoga Lapto	hinge, 360 p, tent, sta	degree	ablet						Max battery life	MobileMark® 2014: 18.1 hr * Battery life varies significantly with settings, usage, & other factors
Pen	Think	Pad Pen P	ro, active	e pen for multi	-touch display	, on-bo	oard recha	argeable	е	AC adapter	45W, 65W, or 65W slim USB-C AC adapter
Storage		the followir 2280 SSE		rable by model	:						Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	M.2Inte	2280 SSE) / PCIe Memory	NVMe 3.0 x 4 H10 with Sol	id State Stora	ige,				Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Optical	None									Mil-Spec test	MIL-STD-810G military testing
Ethernet	Native via or	Intel Ethe	ernet Cor kPad Et	nnection I219- nernet Extens	-V (<i>Non-vPro</i>) sion Adapter C	or I21 Gen 2	9-LM (<i>vP</i>	ro)		Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant
WLAN Bluetooth™	Intel V	Vireless-A	C 9560, \		.11ac + Bluet	ooth 5.		er		1	



ThinkPad X380 Yoga Platform Specifications

Processor	7th Genera	ation Ir	tel® Core	e™ i5 Proce	essor				Smart card reade	rOptional: Smart card reader (mutually exclusive with NFC)
	Processor Number i5-7200U		# of Threads	Base Frequency 2.5 GHz	Max Turbo Frequency 3.1 GHz	Cache 3MB	Types	Processor Graphics Intel HD Graphics	Media reader Ports	One microSD card slot (microSD, microSDHC, microSDXĆ), UHS-I Two USB 3.1 Gen 1 (one Always On), Ethernet extension connector, one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (Power Delivery, DisplayPort, Data
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	620		transfer), HDMİ 1.4b, microSD card reader, nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader
	or 8th Gen	neratior	Intel Co	re i3 / i5 / i	7 Process	or				* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Processor Number i3-8130U			Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	WiGig dock Monitor cable (optional)	None USB-C to VGA: Lenovo USB-C to VGA Plus Power Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	i5-8250U i5-8350U	2	4	2.2 GHz 1.6 GHz 1.7 GHz	3.4 GHz 3.4 GHz 3.6 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics	Camera	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter One of the following, configurable by model:
	i7-8550U i7-8650U	4	8	1.8 GHz 1.9 GHz	4.0 GHz 4.2 GHz	8MB 8MB	DDR4-2400	620	Audio support	720p: HD720p camera, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus HD Audio, Conexant® CX11771 codec / stereo speakers, 2W x 2 /
Graphics	Intel UHD									optional dual array microphone, headphone / microphone combo jack
	supports to	hree in	depende	nt displays	;	,,	*	30Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and 3+2 buttons Mylar surface multi-touch click pad
Chipset Memory	Intel SoC (8GB or 16	(Syster	n on Chi _l 100MHz	p) platform DDR4 / so	Idered to s	vstemb	oard, no so	ckets	Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest
Display	13.3" (337	'.8mm)	FHD (19	20x1080),	LED back	ight, IP	S			Near Field Communication (mutually exclusive with smart card reader)
	AR (anti-re			, 800:1 cor	ntrast ratio,	1/0° V	iewing angl	e,	Battery Max battery life	Li-lon 51Wh battery MobileMark® 2014: 13.6 hrs
Multi-touch	Capacitive supports 1	e-type n	núlti-touc er gesture		i-reflection), AS (a	inti-smudge),	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W AC adapter (slim tip), 45W or 65W USB Type-C AC adapter
Pen	Yoga hinge Laptop, ter ThinkPad	nt, stan	d, yoga a	and tablet pen for mu	ılti-touch di	splay, o	n-board red	chargeable	Light sensor G-sensor/ eCompass	Ambient Light Sensor 3D accelerometer and 3D magnetometer 3D compass
Storage	Some: M.						0 0 000C C	SSD PCIe NVMe)	Gyroscope	3D gyrometer
Optical	None None	2 330	/ PCIE N	vivie, PCIE	3.0 X 4, 3	200/5 (e.g. xxxG 3	SD FCIE INVIVIE)	- 	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Native Inte						์ I219-LM (เ	/Pro)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board service
WLAN Bluetooth™							c + Bluetoot combo ada	h 4.2, M.2 card pter		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WWAN (optional)	One of the f					1 000	ED M.O	(Mil-Spec test	MIL-STD-810G military testing
SIM card (opt)		d Mobi	e Broadl				-ЕВ, М.2 са 50-GL, М.2	rd (EMEA only) card	Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant
Dimensions Weight Case color	WxDxH: Starting at Black or si	3.17 lk			313.5mm	(222.21	mm x 18.2n	nm		
Case Material	Carbon-Fil		orid							
										l enovo



ThinkPad X390 Yoga Platform Specifications

Processor	8th G	enera	ation Ir		re™ i5	/ i7 Pr	ocessor					Dimensions	WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm
	Proces	er	# of Cores	# of Threads	Frequ	uency	Max Turbo Frequency	Cache	Memory Types	Proces Graph		Weight Case color Case material	Starting at 2.85 lb /1.29 kg Black or silver (silver is NOT available in EMEA) Display cover. CF Hybrid PA + 50% GF
	i5-826 i5-836 i7-856 i7-866	5U 5U	4	8	1.6 1.8	GHz GHz	3.9 GHz 4.1 GHz 4.6 GHz 4.8 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD (620			Bottom: CF Hybrid PA + 50% GF rOptional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
Graphics	suppo	orts e	xterna ree in	idepend	monito	or via É splavs:	IDMI or U	,,	e-C; 96x2160@2	24Hz (HDM	ΛI)		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort) one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microphone combo jac
Chipset Memory	8GB d	or 160	GB / 2	m on Ch 400MH is actual	z ĎĎR	4 / solo	dered to s	ystemb OOMHz a	oard, no so lue to Intel lir	ckets nitation		Monitor cable (optional)	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical spee HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Display	Size	Resol	ution	-	Гуре 5	Surface	Brightnes	s Aspec	t Contrast		Viewing Angle	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2 One of the following, configurable by model:
	13.3"	FHD ((1920x1	1080)	IPS re	Anti- eflection	300 nits		800:1	72%	170°		 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Multi-touch Hinge	AS (a	nti-sn	nudge	multi-tou e), could degree	ich, su reduc	pports e the b	10-finger rightness	gesture by up to	e, anti-refle o 10%	ction (AR),		Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Convert-mode Pen	Lapto	p, ter	ıt, star	nd and t		for mult	ti-touch di	splay, o	n-board red	chargeable)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	M.2M.2Inte M.2	2242 2280 Opto 2280	2 SSD 0 SSD ane™	/ SATA / PCIe / PCIe Memory e NVMe	NVMe NVMe / H10	, PCIe , PCIe with Sc		Storage	,				Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Optical Ethernet	None		l Ethai	rnet Co	nnectio	n 1210	N-V (Non-v	(Pro) or	I219-LM (ı	(Pro)		Battery	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Linemet	via bu	indle	d or op	otional T	hinkPa	ad Ethe	ernet Exte	nsion A	dapter Gei	n 2		Max battery life	MobileMark® 2014: 14.5 hr
WLAN (optional)	 Intel 	l Wire	eless-A		, Wi-F	í 2x2 8	02.11ac +					AC adapter	*Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
	Blueto	ooth 5	5.0 wir	eless, ir	ntegrat	ted in V			5.0 combo ada	pter		Light sensor G-sensor Gyroscope	None 3D accelerometer 3D gyrometer
WWAN (optional)	Wire	t the to eless	ollowing WAN	g, contigi uparada	<i>irabie t</i> able (s	<i>y mode</i> pecial l	ol: bid only in	EMEA)			<u> </u>	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	IntegInteg* For n	grate grate on-W	d Mob d Mob <i>WAN n</i>	oile Broa oile Broa onodel, it r	dband dband neans	i 4G LT I 4G LT the mod	E, Fiboco E-A, Fibo <i>lel is NOT V</i>	m L830 com L8 VWAN u	-EB, M.2 ca 50-GL, M.2	card	only)	Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service
												Mil-Spec test	MIL-STD-810G military testing
												Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Generation Intellement Intel Pentium® Silver		m / i5 Processor, Intel Cesor	eron® process	or, or	Dimensions Weight	/xDxH: 11.81" x 8.27" x 0.89"; 300mm x 210mm x 22.5mm rom 3.4 lb / 1.54kg	
	Processor # of Number Cores	# of Threads	Base Burst Cache	Memory Types	Processor Graphics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic	
	m3-7Y30 i5-7Y54 2		1.0 GHz 2.6 GHz 4MB 1.2 GHz 3.2 GHz 4MB	LPDDR3-1866	Intel HD Graphics 615	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),	
	Celeron N4100 Celeron N4120	4	1.1 GHz 2.4 GHz 4MB 1.1 GHz 2.6 GHz 4MB	DDR4-2400	Intel UHD Graphics 600		HDM1.4,Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole	
	Pentium Silver N5000		1.1 GHz 2.7 GHz 4MB	DD114-2400	Intel UHD Graphics 605	Control buttons	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Power button, volume control button	
Graphics	supports external di supports dual indep Max resolution: 384	gital mor endent d 40x2160	UHD Graphics 600 or 605 nitor via HDMI or USB Type lisplay; @60Hz (USB Type-C); 40	e-Ci:	Hz (HDMI)	Camera Audio support	One of the following, configurable by model: 720p: HD720p resolution, low light sensitive, fixed focus World facing: Rear camera, 5MP resolution, auto focuss HD Audio, Realtek® ALC3287 codec Dolby Audio™ / stereo speakers, 2W x 2 / monaural microphone, headphone / microphone combo jack	
Chipset Memory	Intel SoC (System o 4GB or 8GB / 1866N soldered to systemb	MHz ĽÝĽ	DR3 or 2400MHz DDR4 /			Keyboard UltraNav™	6-row, multimedia Fn keys Two buttons click pad below keyboard, multi-touch	
Display MultiTouch Hinge	11.6" (295mm) HD (16:9 aspect ratio, 80 Capacitive-type mult Yoga hinge, 360 deg	00:1 cont ti-touch,	68), anti-glare, LED backliç rast ratio, 170° viewing an supports 10 fingers	ht, IPS, 250 ni gle, Corning® (its, Gorilla® Glass	Security Security chip System Mgt (opt) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified None Property None	
Convertible mode Pen	E Laptop, tent, stand a	and table	t , batteries required, on-boa	ard garage		Battery Max battery life	Integrated Li-Ion 42Wh battery MobileMark® 2014: 12 hrs	
Storage	eMMC flash memory M.2 SSD / PCIe NVI					AC adapter	*Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter or USB Type-C AC adapter	
Optical Ethernet	None	18 00 0	Gigabit Network Connectio	•		Preload	One of the following, configurable by model: • Windows® 10 Home 64	
WLAN	One of the following, co	onfigurable	0		urd		Windows 10 Pro 64 Windows 10 Pro in S mode	
Bluetooth™	Intel Wireless-AC 9 Bluetooth wireless, i	9560, Wi	-Fi 2x2 802.11ac + Blueto d in Wi-Fi + Bluetooth com	oth 5.0, M.2 ca	ard	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year depot repair service	
WWAN	None					Mil-Spec test	MIL-STD-810G military testing	
						Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant	

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ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions WxDxH: 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm			
	Processor # of H of Threads Base Max Turbo Cache Memory Types Processor Graphics Cache Memory Types Processor Graphics Processor Cache Memory Types Processor Cache Cache Memory Types Processor Cache Memory Types Processor Cache Cache Memory Types Processor Cache Ca	Case color	Starting at 2.49 lb / 1.13 kg Black or Silver (silver case is NOT available in EMEA) Display cover: CFRP/GFRP hybrid;		
	i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Intel HD Graphics 620		Bottom: magnesium alloy / PPS hybrid		
	or 8th Generation Intel Core i5 / i7 Processor	Smart card reader Media reader	None MicroSD card reader, supports UHS-II		
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b.		
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz	Monitor cable	Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader, sided docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter		
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;	Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2		
	Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Camera (optional)	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus		
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets * System clocks down for processors with lower memory controller	Audio support	HD Audio, Realtek® ALC3286 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone,		
Display	One of the following, configurable by model: • 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,		headphone / microphone combo jack, Dolby® Atmos™ via headphones		
	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle • 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS.		6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint®pointing device and buttonless glass surface multi-touch touchpad		
	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle • 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, glossy, LED backlight, IPS, 500 nits,16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle	Security Power-on password, hard disk password, supervisor password, security keyho Discrete TPM 2.0, TCG Certified Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the palm rest,			
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)		anti-spoofing technology		
Storage	One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2)	(-/ /	Near Field Communication		
	• M.2 SSD / SAIA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe)	Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
Optical	None	Max battery life	MobileMark® 2014: 19.3 hr		
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2	l	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W Low Halogen USB-C AC adapter		
WLAN +	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card		Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
Bluetooth™	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS Integrated Mobile Broadband 4G LTE-A,		One of the following, configurable by model: 1-year depot repair service		
SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card		 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 		
2 54.4 (561)	Trails of the said story optional voltage in ETE (00) of the said		MIL-STD-810G military testing		
		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		
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ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th G	Generation I	ntel® Co	re™	i5 / i7 Pro	ocessor					WWAN (optional)	One of the following, configurable by model:			
	Proce Numl i5-82 i5-83	essor # of ber Cores 65U	# of Threads	Fre	Base Mequency F	Max Turbo Carequency 3.9 GHz 6	MB MB	Memory Types	Gra	essor phics UHD		 Wireless WAN upgradable (special bid only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable 			
	i7-85	65U ⁴	8	1.	8 GHz	4.6 GHz 8	MB L	LPDDR3-2133		ics 620	Dimensions	Nano-SIM card slot, optional Verizon LTE (US) SIM card WxDxH (Privacy Guard): 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4m WxDxH (other model): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95i			
	or 10	th Generati	on Intel			rocessor (No	OT av	ailable in EV	1EA)		Weight	Privacy Guard model: starting at 2.66 lb / 1.21 kg;			
	Proce		# of Thread			Max Turbo Ca	ache	Memory Types		essor phics	Case color	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave			
	i5-10	210U ₄	8	1	.6 GHz		MB MB	LPDDR3-2133		UHD	Case material	Display cover: Carbon Fiber; Bottom: magnesium alloy			
	_	710U 6	12	\rightarrow			2MB	LFDDH3-2133	Gra	phics	Smart card reader Media reader	None			
Graphics	Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C / Thunderbolt; supports three independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@24Hz (HDMI)							e-C / Thunder	rbolt;		Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
Chipset Memory	Intel 8GB	SoC (Syste or 16GB / 2	m on Cl 2133MH	hip) z LP	platform DDR3 / s	oldered to s	ysten	nboard, no so	ockets		Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2			
Display	Size	Resolution		Туре	Surface	Brightness	Asped Ratio	Ct Contrast Ratio	Color Gamut	Viewing Angle	' ') One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus			
		FHD (1920x Multi-touch		IPS	Anti- reflection Anti- smudge	300 nits	16:9	700:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack 			
	14.0"	FHD (1920x Low Power FHD (1920x		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad			
	14.0"	ThinkPad Pri Guard		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified			
	14.0"	WQHD (256		IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	System Mgt (opt)	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest			
	14.0"	UHD (3840x) HDR 400, Dolby Vision		IPS	Glossy	500 nits	16:9	1400:1	90%	170°	NFČ (optional)	Near Field Communication			
Multi-touch (opt)			multi-to				sture	e (FHD only),			Battery Max battery life	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 18.3 hr			
Storage	One o	of the followin	g, config	urabl	e by model	, ,					1	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter			
		2 2280 SSD 2 2280 SSD									Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
	 Interest 	el Optane™	Memory	y H1	0 with Sol		rage,					One of the following, configurable by model:			
Optical	M.2 2280, PCIe NVMé 3.0 x 4 None											 1-year depot repair service 1-year depot with 2-year system board repair service 			
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) via optional ThinkPad Ethernet Extension Adapter Gen 2								ro)			 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
WLAN +		of the followin									Mil-Spec test	MIL-STD-810G military testing			
Bluetooth™	 Interest 	el Wireless-A el Wi-Fi 6 AX (201 for 10tl	K201, W	/i-Fi	2x2 802.1	1ax + Blueto	ooth 5	5.0			Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant			
Note: The specific	ations	above mav r	not be av	/ailat	ole in all re	aions.		•				Lenovo			





















ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th G	eneration	n Intel® C	ore™ i5	5 / i7 / i9 I	Processor					Dimensions			
	Proce Numb	er Cor	es Threa	ds Fre	quency F	Max Turbo requency Cacl	ne Ty	mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg; Multi-touch model: starting at 4.0 lb / 1.81 kg		
	i5-930 i5-940 i7-975	00H 4 50H 6	8	2.5	5 GHz		B IB DDR	4-2666 Ir	ntel UHD (630		Case color Case material	Black paint (FHD model) or black weave (UHĎ model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy		
	i7-988					4.6 GHz 12M 4.8 GHz 16M					Media reader	er Optional: Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card		
Graphics	NVID suppo	I UHD Graphics 630 in processor and DIA® GeForce® GTX 1650, 4GB GDDR5 memory; ports external digital monitor via HDMI or Thunderbolt™; ports four independent displays; cresolution: 5K@60Hz (Thunderbolt); 4K@60Hz (HDMI)									Ports Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbo (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack optional smart card reader, SD card reader, security keyhole, slim tip AC adap * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical sp			
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets						e, two D	DR4 SC	D-DIMM s	sockets	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
Display	Size	Resolution	1	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		Optional: ThinkPad Ethernet Extension Cable		
	15.6"	FHD (192	0x1080)	IPS	Anti-gla	re 300 nits	16:9	700:1	72% NTSC	170°	Camera (optional	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus		
	15.6	FHD (192 Dolby Visi	on™ HĎR	IPS	Anti-gla	re 500 nits	16:9	1200:1	72% NTSC	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / 		
	15.6"	UHD (384 Dolby Visi	0x2160) on HDR	IPS	3 **	re 500 nits	16:9	1200:1	100% Adobe	170°		optional dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system		
	15.6"	UHD (384 Dolby Visi Multi-touc	on HDR,	OLED	Anti- reflectio Anti- smudge	(poak)	16:9	100000:1	100% DCI-P3	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad		
Multi-touch (opt) Pen (optional)	anti-r	citive-typ eflection vo Pen P	(AR), an	ti-smuc	upports	10-finger ges	ture (UI	HD OLE	D only),		Security Power-on password, hard disk password, supervisor password, security keyhole Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the keyboard bezel			
Storage	M.2 2	two M.2 S 2280 SSD	/ PCle I	VVMe (3.0 x 4						Color calibration NFC	Optional: X-Rite Pantone factory color calibration (UHD model only) None		
RAID <i>(optional)</i> Optical	RAID None	0/1 supp	ort								Battery Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 14 hr		
Ethernet						V (<i>Non-vPro</i>) rnet Extensio			Pro))		AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter		
WLAN (optional) Bluetooth™						ax + Bluetooth		bo adap	ter		Operating system Limited warranty	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:		
WWAN SIM card	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter None None										_ Limited warranty	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 		
									Mil-Spec test	MIL-STD-810G military testing				
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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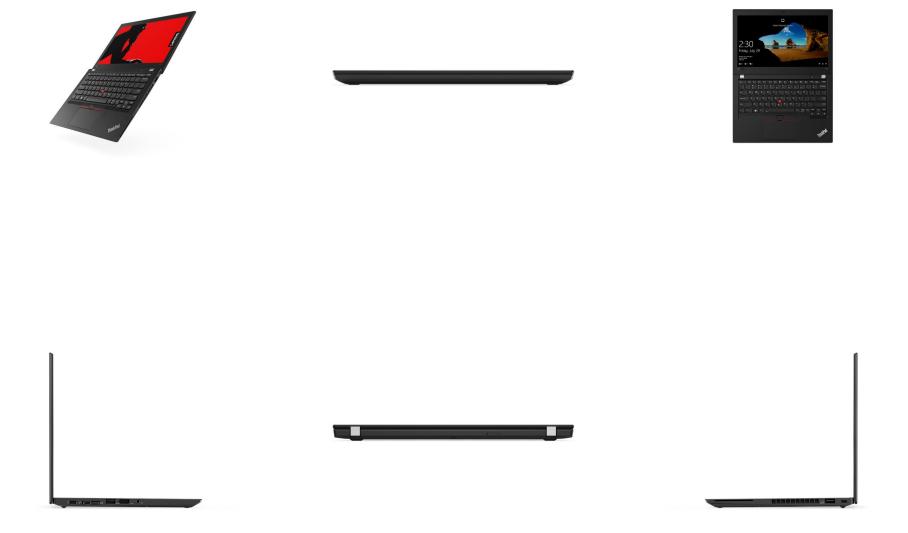






ThinkPad X270 Platform Specifications

Processor Frond Finded	Processor	6th Generation I	ntel® Cor	o™ i3 / i5 / i	7 Processor			Dimensions	WxDxH: 12.03" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm				
Number Cores Threads Fraguency Engagency E	1 10003301				Mary Trustee	Memory	Processor						
Case color Case color Case color Case color Case color Case color Case color Case color Case color Case color Case color Case color Case color Case color Case Case color Case Case color Case Ca													
Second Part				2.0 GHz									
Section 2						1		Case material	Display cover: Glass-Fiber Reinforced Plastic;				
Media reader Minimal Minimal Media reader Minimal Mini			DDR4-2133	0									
Post The Generation Intel Cord 31 of 17 Processor Processor Formation Processor Processor Formation Processor Processor Formation Processor Processor Formation Processor Processor Processor Processor Formation Processor						-	520						
Signification (continue) Wilding of the following and DisplayPort), Multi-found (pp) For processor in the Core in Fire in For in Formation (pp) For processor in F						1							
Processor # of # of # of # of # of # of # of #			n Intel Co		· · · · · · · · · · · · · · · · · · ·				USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),				
Number Cores Treaded Frequency Frequency Callette Types Graphics					Max Turbo	Memory	Processor						
Monitor cable Monitor cabl									ThinkPad WiGig dock, mutually exclusive with WWAN (US only)				
Signature Storage St		i3-7100U											
F-3900 2 4 2.6 GHz 3.5 GHz 4MB 2.8 GHz 3.9 GHz 4MB 2.8 GHz 3.9 GHz 4MB 3.2 GHz 4MB 4				2.5 GHz			Intel HD Graphics	(optional)					
Signature 1.7.78000 2.7.6Hz 2.5.6Hz 4MB 2.7.78000 2.7.6Hz 2.5.6Hz 4MB 2.7.78000 2.7.6Hz 2.5.6Hz 4MB 2.7.78000 2.7.78000 2.7.78000 2.7.6Hz 2.5.6Hz 4MB 2.7.78000 2.7.78000 2.7.78000 2.7.78000 2.7.78000 2.7.800000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.800000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.80000 2.7.800000 2.7.800000 2.7.800000 2.7.8000000 2.7.800000000000000000000000000000000000			4			DDR4-2133		Camera (ontional					
Intel HD Graphics 520 or 620 in processor; supports actern al digital monitor via HDMI or USB Type-C; supports actern al digital monitor via HDMI or USB Type-C; supports enter endependent displays; Max resolution: 4056x2160 € 050-12; 0.158 Type-C; 4056x2160 € 24Hz (HDMI) Scurity Intel SDG (System on Chip) platform Memory In						4			HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /				
supports external digital monitor via HDMI or USB Type-C; 4096x2160@24Hz (HDMI) Chipset independent displays: Max resolution: 4096x2160@60Hz (USB Type-C); 4096x2160@24Hz (HDMI) Intel SoC (System on Chip) platform Intel SoC (System on Chip) platform 16GB max / 2400MHz DDR4, one DDR4 SO-DIMM socket System costs down for processors with lower memory controller Display Some: 12.5° (317.5mm) HDI (1366x768), anti-glare, LED backlight, 220 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) HDI (1366x768), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) HDI (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 1707 viewing angle Some: 12.5° (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratios, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast ratio, 5001: contrast r													
Supports three independent displays; Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@24Hz (HDMI) Max resolution: 4096x2160@50Hz (USB Type-C); 4096x2160@50Hz (US	Graphics					C.							
Max resolution: 4096x2160@60H2 (USB Type-C); 4096x2160@24H2 (HDMI) Chipset Memory Intel SoC (System on Chip) platform 16GB max / 2400MH2 DDH4, one DDH4 SO-DIMM socket 75ystem docks down for processors with lower memory controller Display Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001: contrast ratio, 170° viewing angle Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001: contrast ratio, 170° viewing angle Some: 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001: contrast ratio, 170° viewing angle Some: 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 7001: contrast ratio, 170° viewing angle Some: HDD / SATA 6.0Gbls, 2.5" wide, 7mm high, 61, sxxx6B SSD) Some: M2 SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 4ctive Protection System™ some: SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD) Some: M2 SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 4ctive Protection System™ some: SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD) Some: M2 SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wide, 7mm high, 62, sxx6B SSD / SATA 6.0Gbls, 2.5" wid						ie-C;							
Chipset Memory 16GB mar (2400MHz DDPA, one DDP4 SO-DIMM socket 'System clocks down for processors with lower memory controller Display Some: 125 (317.5mm) Ptl (1366XF88), anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio Some: 125 (317.5mm) Ptl (1366XF88), anti-glare, LED backlight, 1PS, 300 nits, 16.9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Storage Some: 125 (317.5mm) Ptl (1956XF88), anti-glare, LED backlight, 1PS, 300 nits, 16.9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-linger gesture (FHD only) Multi-touch (opt) On-cell touch, supports 10-linger gesture (FHD only) Storage System has one HDD sot or one M. 2 2280 sid exclusively for storage Some: 126GB Mz SSD) / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: 128GB Mz SSD) / SATA 6.0Gb/s, 10-WANA slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in WwAN (slot as 2nd Storage, None 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage) / SATA 6.0Gb/s, in Wwan (slot as 2nd St						96x2160@	24Hz (HDMI)		Power-on password, hard disk password, supervisor password, security keyhole				
Memory 16GB max / 2400MHz DDR4, one DDR4 SD-DIMM socket System locks down for processors with lower memory controller NFC (optional) Near Field Communication Near Field C	Chipset	Intel SoC (System on Chip) platform											
Some: 12.5" (317.5 mm) HD (1366x769), anti-glare, LED backlight, 200 nits, 169 aspect ratio, 5001 contrast ratio Some: 12.5" (317.5 mm) HD (1366x769), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 5001 contrast ratio Some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 7001 contrast ratio 170° viewing angle Some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 7001 contrast ratio, 170° viewing angle Some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 7001 contrast ratio, 170° viewing angle Some: 12.5" (317.5 mm) FHD (1300x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 7001 contrast ratio, 170° viewing angle Some: 128.05 lbs, 100 source, 100 sourc	Memory		16GB max / 2400MHz DDR4, one DDR4 SO-DIMM socket					Fingerprint reade	Optional: Touch style match on chip fingerprint reader on the palm rest				
220 nits, 16:9 aspect ratio, 500:1 contraist ratio Some: 12:5" (317.5mm) HD (1366×768), anti-tigare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 800:1 contraist ratio, 170° viewing angle Some: 12:5" (317.5mm) FHD (1920×1080), anti-tigare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contraist ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD stot or one Mz 2280 sot exclusively for storage Some: 10D / SATA 6, 0Gb/s, 2.5" wide, 7mm high, active Protection System™ Some: 126GB Mz 2SD / PCR NNMe, PCR 05, 3 v 2.1 (560; 3 v 2.1 (D: 1		•					 _ ` ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′					
Some: 12.5° (317.5mm) HD (1366x768), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratio, 800-1 contrast ratio, 170° viewing angle Modelle Max battery life (MobileMark® 2014) Max battery life (MobileMark® 2014) Max battery life (15.52 hr 13.04 hr 26.11 hr 26.9 hr 10.00 nits, 16.9 aspect ratio, 70° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD stor one Mz 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: 128GB Mz SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: 128GB Mz SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig None Intel Ethernet Connection 1219-LM (Jacksonville) vPro model: Intel Ethernet Connection 1219-LM (Jacksonville) vPro model: Intel Ethernet Connection 1219-LM (Jacksonville) vPro model: Intel Dual Band Wireless-AC 8260, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless-AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650, Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650 (Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650 (Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650 (Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650 (Wi-Fi 2x 802.11ac + BT4.1 intel Dual Band Wireless AC 82650 (W	Display	Some: 12.5" (3"	17.5mm) 16:9 asr	HD (1366X) ect ratio 50	/68), anti-glare, L 00:1 contrast ratio	.ED backligi	nt,						
Some: 12.5° (317.5mm) FHD (1920x1080), anti-contrast ratio, 170° viewing angle some: 12.5° (317.5mm) FHD (1920x1080), anti-clare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD stor on one M.2 2280 stot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: 1286B M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: 1286B M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: 1286B M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD / SATA 6.0Gb/s, 1.5° wide, 7mm high (e.g. xxxGB SSD / SATA 6.0Gb/s, 1.5° wide, 7mm hi		Some: 12.5" (3	17.5mm)	HD (1366x)	768), anti-glare, L	.ED backlig	nt, IPS,						
Multi-louch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD is ATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig None Ethernet Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-LM (Jacksonville) **Pro model: Intel Ethernet C		300 nits,	300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 170° viewing angle						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				
Multi-louch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: N2 SSD / PCIe NVMe, PCIe 3.0 x 2, 166 b/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical Non-vPro model: Intel Ethernet Connection 1219-V (Jacksonville) vPro model: Intel Ethernet Connection 1219-LM (Jacksonville)													
Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN):	Multi-touch (opt)					o, i i o view	ing angle	AC adapter	45W slim tip AC adapter or 45W USB Type-C AC adapter				
Some: SSD / SATA 6.OGb/s, 2.5" wide, 7mm high (e.g. xxxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.OGb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LN (Jacksonville) vPro model: Intel Ethernet Connection I219-LN (Jacksonville) vPro model: Intel Ethernet Connection I219-LN (Jacksonville) wPro model: Intel Ethernet Connection I219-V (Jacks	Storage	System has one H	DD slot or	one M.2 228	0 slot exclusively for	r storage		Operating system					
Some: M.2 SSD / SCH NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-V (Macksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 8265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 8265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Sual Band Wireless-AC 8265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 8265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 18265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Sual Band Wireless-AC 18265, wi-Fi 2x2 802.11ac + BT4.1 • Intel Mary Tirel Read Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455)	Ü								Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64				
Some: 128GB M.2 SSD / SATA 6.05db/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) wPro model: Intel Ethe							SD)						
Ditical None Ethernet Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN One of the following, configurable by model: Miles Ethernet Connection I219-LM (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Basic / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery dipot ensite service Mil-Spec test MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant • Intel Basic / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery dipot repair service • 3-year/1-yr battery depot repair service							torage.						
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): Paeltlek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tin-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tin-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tin-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel B265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card		mutually						Limited warranty	One of the following, configurable by model:				
WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Buetooth 1.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card													
WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tirl-Band Wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac ard support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE-Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	Ethernet		: Intel Eth	ernet Conr	nection I219-V (Ja	acksonville)	. \						
Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth 1.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	\A/I. AAI						,	Mil-Spec test	<u> </u>				
Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tri-Band Wireless-AC 18265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	WLAN					y exclusive w	ith vvvvAN):	<u>'</u>					
• Intel Tri-Band Wireless-AC 18265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card						ac + BT4.1		Environment	EPEAL *** Gold (05 only); ENERGY STAR* 6.1; Rons-compilant				
Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card													
Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card			Vireless-	AC 18265, V	ViGig 802.11ad +	· Wi-Fi 2x2	302.11ac + BT4.1						
* Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	Bluetooth™		reless. in	tearated in	Wi-Fi + Bluetooth	combo ada	pter						
 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card 		* Intel 8265ac / 18	265ac car	d support BT4	4.2 but is limited to E	3T4.1 by Win	dows OS	_					
 Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card 	WWAN (optional)				el (mutually exclusiv	e with WiGig) <i>:</i>						
Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card					ΤΕ-Δ								
• Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card		Qualcomm® Sr	napdrago	n™ X7 LTE	- A (Sierra Wireles	ss EM7455)						
SIM card (opt) Micro-SIM card slot, opt Verizon LTE (UŚ) or Lenovo Connect (EMEA) SIM card		 Integrated Mobility 	oile Broad	lband 4G L	TE,		•						
() ,	SIM card (ant)						MEA) CIM og "d						
	Glivi Caru (<i>Opt)</i>	iviicio-Siivi card	siot, opt \	enzon LIE	(US) OF LeftOVO®	Connect (E	ivica) Silvi card		1				



ThinkPad X280 Platform Specifications

Processor				e™ i3 / i5 P n US and EN		OU is NO	T available ir	n US	Dimensions WxDxH: 12.11" x 8.26" x 0.69-0.70"; 307.7mm x 209.8mm x 17.4-17.8mm Weight FHD non-touch model: 2.49 lb / 1.13 kg;				
	Processor Number	# of	# of Threads	Base	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HD non-touch model: 2.78 lb / 1.26 kg; FHD multi-touch model: 2.79 lb / 1.27 kg			
	i3-7020U i3-7130U i5-7200U	2	4	2.3 GHz 2.7 GHz 2.5 GHz	- - 3.1 GHz	3MB 3MB 3MB	DDR4-2133	Intel HD Graphics 620	Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch model) or Glass Fiber (HD & FHD multi-touch model); Bottom: Magnesium/Aluminum			
									Smart card reader Optional: Smart card reader Media reader MicroSD card reader, in the combo slot with nano-SIM card				
	Processor # of # of Base Max Turbo Cooks Memory Processor								Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	Number i3-8130U	Cores 2	Threads 4	Frequency 2.2 GHz	Frequency 3.4 GHz	4MB	Types	Graphics		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector.			
	i5-8250U i5-8350U i7-8550U i7-8650U	4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620	- Monitor cable	combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)							30Hz (HDMI)	(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2 I) One of the following, configurable by model:			
Chipset Memory	4GB, 8GB * 4GB mem	, or 16 ory is N	GB / 240 VOT availa	ble in US an	R4 / soldere	,	•	, no sockets	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / 			
Display	22 Some: 12	20 nits, 2.5" (31	16:9 aśp I7.5mm)	ect ratio, 4 FHD (1920	00:1 contra 0x1080), an	ist ratio ti-glare	, LED back	ight, IPS,	 Keyboard UltraNav™	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Multi-touch (opt)	On-cell to:	uch. sí	ipports 1	ect ratio, 7 0-finger ge OT available	sture (FHD	st ratio only)	, 170° view	ing angle	Security Security chip vPro (optional) Fingerprint reader Optional: Power-on password, hard disk password, supervisor password, security keyhole piscrete TPM 2.0, TCG Certified Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology				
Storage	 M.2 SSE 	/ SAT	A 6.0Gb/	rable by mod s (e.g. xxx0 PCIe 3.0 x	GB SSD M.	.2) (e.g. x)	vGB SSD	M.2 PCIe NVMe)					
Optical	None								NFC (optional) Battery	Near Field Communication Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr)			
Ethernet							1219-LM (ı dapter Ger		Max battery life	with 65W AC adapter MobileMark® 2014: 16.6 hr			
WLAN + Bluetooth™					Vi-Fi 2x2 80 limited to B1			h 4.1, M.2 card	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB-C AC adapter			
WWAN (optional) SIM card (opt)	 Integrate Intel XMI Integrate Intel XMI * For non-M 	ed Mob M™ 72 ed Mob M™ 73 VWAN n	pile Broad 62 (Fibodoile Broad 660 (Fibodonodel, it m	lband 4G L com L830-E lband 4G L com L850-C eans the mo	TE, EB), M.2 ca	rd VWAN u	pgradable		Limited warranty	 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
(-1-7)	optional Ve								Mil-Spec test	MIL-STD-810G military testing			
Note: The specifica									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Lenovo			



ThinkPad X390 Platform Specifications

Processor	8th Ge	neratio	n Int	tel® Core	e™ i3 / i	i / i7	Processo	r				Dimensions	Models	FHD Non-touc	ch	HD /	FHD Multi-touch		
	Process			# of Threads	Base Frequen		lax Turbo requency	Cache	Memory Types		cessor aphics		Carbon Fiber	311.9mm x 217.0mm 12.28" x 8.54" x 0			-		
	i3-8145	J 2	_	4	2.1 GH	z ;	3.9 GHz	4MB	турсэ	GIE	дриноз	1	PPS	312.0mm x 217.2mm x 16.9mm 312mm x 217.2mm x 16.9mm					
	i5-8265				1.6 GH	-		6MB	DDD 4 0 400	Intel UH	D Graphic	j				8" x 8.55" x 0.67"			
	i5-8365 i7-8565		.	8	1.6 GH 1.8 GH			6MB 8MB	DDR4-2400	(620	Weight	Models	FHD Non-touch	Н	ID	FHD Multi-touch		
	i7-8665			ŀ	1.9 GH	_		8MB					Carbon Fiber PPS	2.70 lb / 1.22 kg 2.85 lb / 1.29 kg	2 02 lb /	- / 1 22 kg	- 2.84 lb / 1.28 kg		
			atio	n Intel C					/ailable in E	MEA)		Case color	Black	2.05 lb / 1.29 kg	2.85 lb / 1.29 kg 2.93 lb / 1.33 kg 2.84 lb / 1.28 kg				
	Process			# of Threads	Base Frequen		lax Turbo requency	Cache	Memory Types		cessor aphics	Case material	Display cover: Bottom:	Carbon Fiber (FHD r Magnesium/Aluminu		only) or PPS	5;		
	i5-1021 i7-1051	DU _	\neg †	8	1.6 GH 1.8 GH	z 4	4.2 GHz	6MB 8MB	DDR4-2400	Intel UH	D Graphic	Tivieula readei	MicroSD card	reader, in the combo s		no-SIM card	i		
Graphics	Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)								e-C;	24Hz (Hl	DMI)	= Ports	Ports Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Dis one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reade						
Chipset Memory	4GB, 8 * 32GB	GB, 16 memory	GΒ is Λ	IOT availa	3 / 2400 able for n	ЛHz nodels	with 10th	Gen pro	I to systeml ocessor ue to Intel lim	,	no socket	headphone / microphone combo jack, optional smart card reader,							
Display	Size R	esolutio	n	Ту	pe Sur	ace	Brightness	Aspec Ratio		Gamu	ut Angle	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2						
	13.3" H	D (1366	x768	B) T	N Anti-	glare	250 nits	16:9	500:1	45%	90°	Camera (optional		nera with ThinkShutter					
	13.3" F	`			PS Anti-	glare	300 nits	16:9	800:1 (non-touch 700:1 (multi-touch	1270	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privace HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone 			, ,			
	13.3" T	HD (192 ninkPad uard			PS Anti-	glare	400 nits	16:9	1000:1	72%	178°	Keyboard UltraNav™	6-row, spill-res TrackPoint® po	sistant, multimedia Fn Finting device and butto	keys, option	nal LED bac r surface m	klight ulti-touch touchpad		
Multi-touch (opt)	On-cell	touch,	sup	ports 10)-finger	gestı	ure (FHD o	only)				Security	Power-on password, hard disk password, supervisor password, security keyho				ord, security keyhole		
Storage	M.2 2M.2 2	242 S 280 S	SD / SD /	/ SATA 6 / PCIe N / PCIe N //emory	VMe, P VMe, P	Cle 3		torage				Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Intel vPro Tech	ch style match on chip	fingerprint	reader on t	he palm rest		
Optical	M.2 2 None	280, P	Cle	NVMé (3.0 x 4			Ü	•			Battery	Integrated Li-id	on 48Wh battery, supp	orts Rapid	Charge (ch	arge up to 80% in 1hr)		
Ethernet	Native								I219-LM (<i>v</i> dapter Gen			Max battery life AC adapter	MobileMark® 2 * Battery life val			& other factor	s		
WLAN (optional)							2.11ac + E 1ax + Blue							dows® 10 Home 64 or		0 Pro 64			
Bluetooth™ (opt)										pter		Limited warranty	1-year depot	t repair service					
WWAN (optional)	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA on • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable										EA only)	(optional)	1-year limite3-year/1-yr b	t with 2-year system bo d onsite service pattery depot repair ser pattery limited onsite se	vice	service			
SIM card (opt)	Nano-S	IM car	d sle	ot, in the	combo	slot	with micro					Mil-Spec test							
	optiona	ı verizo	on L	TÉ (US)	SIIVI CA	d						Environment	EPEAT™ Gold	; ENERGY STAR® 7.1	; RoHS-con	npliant			
Note: The specifica	tions ab	ove ma	v no	t he ava	lable in	all rec	nions										Lenovo		



ThinkPad X395 Platform Specifications

Processor	AMD	Ryzen™ Pl	RO Mobi	le Pro	ocessors	with Rac	leon™ Ve	ga Graphics	i		Dimensions	WxDxH: 12.28" x 8.55" x 0.67"; 311.9mm x 217.2mm x 16.9mm					
	Proce		# of			lax Turbo	Cache	Memory Controller		essor	Weight	Models HD / FHD multi-touch FHD non-touch FHD Privacy Guard					
	Ryzer	3	Threads	<u> </u>		requency	2MB L2 /	Controller		ohics n Vega 6	Case color	Weight 2.91 lb / 1.32 kg 2.82 lb / 1.28 kg 3.01 lb / 1.37 kg Black					
	Pro 3		4	2.1	GHz 3	3.5 GHZ	4MB L3		Grap	ohics	Case material	Display cover: PPS/GF;					
	Ryzer Pro 3		8	2.1	GHz 3		2MB L2 / 4MB L3	DDR4-2400		Vega 8 ohics	Smart card roads	Bottom: Magnesium/Aluminum rOptional: Smart card reader					
	Ryzer Pro 3		8	2.3	GHz 4		2MB L2 / 4MB L3			Vega 10 ohics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2.					
Graphics	suppo	Radeon Vorts externorts three in esolution:	al digital	moni lent d	itor via U lisplavs:	ISB-C or	HDMI;	rocessor; 60@24Hz (F	HDMI)			two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole					
Chipset Memory	8GB	SoC (Systor 16GB / : lled memor	2400MH	z ĎĎİ	R4 / sold	lered to s	00MHz du	ard, no sock ie to AMD limi	itation		Monitor cable (optional) Bundled Accv	*Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2					
Display	Size	Resolution		Туре	Surface	Brightnes	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		One of the following, configurable by model:					
	13.3"	HD (1366x7	768)	TN /	Anti-glare	250 nits	16:9	300:1	45%	90°		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus					
	13.3"	FHD (1920:	x1080)	IPS	Anti-glare	300 nits	16:9	800:1 (non-touch) 700:1 (multi-touch)	72%	170°	Audio support	The carrier a and rib72by carrier a with ThinkShutter carrier a privacy, fixed locus HD Audio, Realtek ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack					
	13.3"	FHD (1920: ThinkPad P Guard	x1080) Privacy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
Multi-touch (opt)	On-ce	ell touch, s	upports	10-fin	iger gest	ure (FHD	only)				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified					
Storage		2280 SSI 2280 SSI				2 O v 4					System Mgt	DASH Management					
Optical	None		D/ FOIE	INVIVI	e, role i	3.0 X 4					Fingerprint reade NFC	r Optional: Touch style match on chip fingerprint reader on the palm rest None					
Ethernet	Nativo via bu	e Realtek® Indled or c	RTL815 optional T	3 Gig hinkF	abit Ethe	ernet con ernet Exte	nection nsion A	dapter Gen 2	2		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter					
WLAN <i>(optional)</i> Bluetooth™		Vireless-A ooth 5.0 w						n 5.0 combo adapt	er		Max battery life	MobileMark® 2014: 14.5 hr * Battery life varies significantly with settings, usage, & other factors					
WWAN (optional)		f the following			by model	l:					AC adapter	45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64					
SIM card (opt)	• Inte * For r	eless WAN grated Mo non-WWAN -SIM card	bile Broa model, it i	adban <i>means</i>	s the mode	el is NOT V	VWAN up		ard		Limited warranty	One of the following, configurable by model: 1 -year depot repair service 3-year/1-yr battery depot repair service					
						` ,						3-year/1-yr battery limited onsite service					
											Mil-Spec test	MIL-STD-810G military testing					
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant					

Note: The specifications above may not be available in all regions.

Lenovo December 2019

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Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

October 30, 2019 - Version 550

Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

ThinkPad X1 Tablet (3rd Gen) - Spec updated

Withdrawals in this update

► Withdrawn product(s)

None





ThinkPad X1 Tablet (3rd Gen) Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor Processor # of	Control buttons Dock (Optional)	Power button, volume control button, reset switch Thin Keyboard (Magnetic Detachable)			
	Number Cores Threads Frequency Frequency Cache Memory Types Graphics i5-8250U 1.6 GHz 3.4 GHz 6MB i5-8350U 4 8 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB	Monitor cable Bundled Accy (optional)	USB-C Dock Gen 2 None USB-C to RJ45: Lenovo USB-C to Ethernet Adapter USB-C to VGA: Lenovo USB C to VGA Plus Power Adapter USB-C to HDMI: Lenovo USB-C to HDMI Plus Power Adapter			
Graphics	Intel UHD Graphics 620 in processor, supports external digital monitor via USB Type-C	Camera IR Camera	Front camera: 2.0-megapixel, fixed focus Rear camera: 8.0-megapixel, auto focus Optional: IR camera, fixed focus (mutually exclusive with NFC)			
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3, soldered to systemboard, no sockets	Audio support	Realtek® ALC3278 codec / stereo speakers, 1W x 2 / dual array microphones, combo audio/microphone jack			
Display	13.0" (330mm) QHD+ (3000x2000), glossy, LED backlight, IPS, anti-figerprint display with Corning® Gorilla® Glass, WideView (160° viewing), 400 nits, 3:2 aspect ratio, 1200:1 contrast ratio	Pogo keyboard Keyboard color	Magnetic attached thin keyboard, with TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch, backlit Black			
Multi-touch Pen <i>(optional)</i> Kick stand	Capacitive touch panel, supports ten-finger gesture Lenovo Pen Pro or Lenovo Active Pen (ThinkPad Pen Pro) Opening angle up to 170 degrees	Security Security chip System Mgt (opt)	Kensington lock slot Discrete TPM 2.0 TCG Certified Intel vPro Technology r Optional: Touch style Fingerprint reader			
Storage	One of the following, configurable by model: • M.2 2280 SSD / SATA 6.0Gb/s	NFC (optional)	Near Field Communication (mutually exclusive with IR camera)			
Optical Storage extension	M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s None One MicroSD card reader, in the combo slot with nano-SIM card, support USH-I, microSDHC, microSDXC	Max battery life AC adapter	Integrated Li-Ion 42Wh battery MobileMark® 2014: 9.5 hrs * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
Ethernet	None	Light sensor	Ambient Light Sensor			
WLAN Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter	G-sensor Gyroscope GPS (optional)	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module			
WWAN (optional) SIM card (opt)	Integrated Mobile Broadband 4G LTE-A, Qualcomm [®] Snapdragon [™] X7 LTE-A (Sierra Wireless EM7455) Nano-SIM card slot, in the combo slot with microSD card reader	Preload	One of the following, configurable by model: • Windows® 10 Pro 64 • Windows 10 Home 64			
Dimensions Weight	Tablet only: 11.97" x 8.9" x 0.35"; 304.1mm x 226mm x 8.9mm Tablet + keyboard: 11.97" x 8.9" x 0.57"; 304.1mm x 226mm x 14.4mm Tablet only: starting at 1.96 lb / 0.89kg	Limited warranty	One of the following, configurable by model: 1-year depot repair service			
Case color Case material	Tablet+ keyboard: starting at 2.8 lb / 1.27kg Black Magnesium/Aluminum		 1-year depot with 2-year system board service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
Ports	Two USB 3.1 Type-C Gen 1 ((with the function of Power Delivery and DisplayPort),	Mil-Spec test	MIL-STD-810G military testing			
	one Pogo keyboard connector, one Pen holder slot, headphone / microphone combo jack, combo slot of nano-SIM card (WWAN models) and microSD card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed	Environment	EPEAT™ Silver, GREENGUARD, Low Halogen, RoHS			

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Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

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Summary of Changes

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This edition might also include minor corrections and editorial changes which are not identified.

September 2019 - Version 549

Additions in this update

► New product(s)

ThinkCentre M75s SFF ThinkCentre M720e SFF

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(s)

None

► Withdrawn model(s)

None













ThinkCentre M810z Platform Specifications

Processor	Intel® Celeron®, Int	tel Pentiur	n®, or 6th / 7th G	en Intel	Core™ i3 / i5 / i7 I	Processor	Security features	Security slot (in rear for attachment of Power-on, admin, hard disk password					
	Processor	Cores /	Frequency	Cache	Memory Support		1	optional Kensington® MicroSaver® cable; • Boot sequence control					
		1	Base/Max(GHz)		(Up to)	Graphics		 Kensington lock also locks chassis) Smart USB protection, allows keyboard/ Individual USB port disablement 					
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510	-	mouse only, blocks all storage devices Optional Chassis intrusion switch					
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	-	Optional cable lock to physically lock Is the send and may see					
	Pentium G4600	2/4	3.6G 3.7G	3 MB 3 MB	DDR4-2400 DDR4-2133	HD 630	17. 1	keyboard and mouse					
	Core i3-6100 Core i5-6500	4/4				HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black					
	Core i7-6700	4/4	3.2G / 3.6G 3.4G / 4.0G	6 MB 8 MB	DDR4-2133 DDR4-2133	HD 530 HD 530	-	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black					
	Core i3-7100	2/4	3.4G / 4.0G 3.9G	3 MB	DDR4-2133 DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black					
	Core i5-7100	4/4	3.0G / 3.5G	6 MB	DDR4-2400 DDR4-2400	HD 630	-	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black					
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mechanical	Business black color					
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	1	• Toolless stand					
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	1	Support VESA mount (100mm)					
Marian							4	Dimensions (WxDxH) Max weight (lb / kg) Adjustments					
Memory	32GB max, DDR4 * System clocks do	,			*			Without stand: 21.1 X 1.8 X 14.3 (inch); (Touch) 14.6 / 6.6 (Non-touch) 12.8 / 5.8 N/A					
Storage	Some: Hard Drive Some: Solid State	Drive (S	SD) / SATA 6.0G	b/s. 2.5"	· ·			With Basic Monitor stand: 21.1 X 9.6 X 17.0 (inch); (Non-touch) 17.0 / 7.7 Tilt: 45° back, -5° forward					
Optical	Some: M.2 Solid Some: Intel Optar Some: DVD-RON Some: DVD Burn	State Driv ne™ Memo I SATA 1.5 er (DVD±l	e (SSD) / PCIe N ory (models with 5Gb/s Drive, slim RW), SATA 1.5Gl	IVMe, Po 7th gen (9.5mm)	Core processor),	√s M.2		With UltraFlex II stand: 21.1X 10.0 X 19.3 (inch); (Touch) 20.3 / 9.2 (Non-touch) 18.3 / 8.3 Tilt: 61° back, -5° forward; (Non-touch) 18.3 / 8.3 Lift: 110mm; Swivel: +/-45°					
Media reader	Optional 9-in-1 me	edia card r	eader				Power supply	150 watts, autosensing, 85% PSU					
Graphics	Intel HD Graphics external monitor si	upport via	DisplayPort [™] ;	-	•	DirectX® 12	Limited warranty ³	Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available					
Display	Max resolution: 40 21.5" (546.1mm) F angle (+/- 89°), LE anti-glare, support	Full HD 1(D backligl)80p (1920x108) nt, 250 nits, 16:9	D) TFT co	olor, MVA panel,	wide viewing rast ratio,	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64 listed) Preloaded applications (only some listed)					
Multi-touch Camera	Optional Projected Optional 1080p ca switch on/offf	I Capacitiv mera, fixe	re Touch (PCT) to d focus, with dua	al microp	hone, LED indica	tor, physical		preinstalled through downgrade • Microsoft Office preloaded; rights in Windows 10 Pro 64-bit only for Windows 10 Pro 64-bit • Microsoft Office preloaded; purchase a product key to activate - Only for Window 10 • Lenovo Companion					
Controls	Physical buttons for	or Microph	one mute, bright	ness up/	down, and power	on/off		- Only for Window 7					
Chipset	Intel B250 Chipse	et						Lenovo Solution Center Lenovo ThinkVantage Tools					
Rear ports* Side ports*	Four USB 3.1 Gen Two USB 3.1 Gen one headphone / r * Depending on man	1 (one is A nicrophon v factors, ac	Always On and fa e combo jack (3. ctual data transfer s	st chargi 5mm) speed may	e), optional card r	reader,		ThinkVantage System Update Create Recovery Media Adobe® Reader® Cyberlink PowerDVD Create					
M.2 card slot	Two M.2 Card slot	`			<u> </u>		<u> </u>	(DVD±RW)					
Audio support	High Definition (HI Dolby [®] Audio™ cer	,	Realtek ALC233	/ two inte	ernal speakers (2'	W x 2),	Environment	EPEAT™ Gold rating (North America); ENERGY STAR® 6.1; TCO AIO Computer Certified; ErP Lot 3; GREENGUARD® certified; RoHS-compliant					
WLAN ¹³	Some: 11ac wirel Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Qualcomm 1 combo adapter	Atheros	QCA9377A (dua	l band),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)					
	Some: 11ac wirel	ess, M.2 (Card, Qualcomm 1 combo adapter	Atheros	QCA6174A (dua	l band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com					
		uetooth 4.	1 combo adapter	; 1x1									
	Some: 11ac wirel	ess, M.2 (letooth /	Card, Intel Dual E 1 combo adapter	sand Wir · 2x2	eiess-AU 8265,								
Bluetooth™ Ethernet	Some: Bluetooth 4 Gigabit ethernet, F	.1 wireles	s, integrated in V	Vi-Fi + Bl	uetooth combo a	dapter							
Manageability Security chip	None TPM (Trusted Plat * Downgrade to TF				G Win7 32 OS								
Soo footpotos for	more detailed informa	tion			<u>-</u>			© Lenovo					

























ThinkCentre M820z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9) series	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),				
1 10000001		Cores /	Frequency		Memory Support		VV 12 (14	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1				
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2				
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,				
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1				
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,				
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	Bluetooth™	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter				
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Ethernet	Gigabit ethernet, Realtek RTL8111G, Wake on LAN®				
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Manageability	None				
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified				
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Security features	• Security slot (in rear for attachment of • Power-on, admin, hard disk password				
	Pentium Gold G5620	2/4	4.0G 3.6G	4 MB	DDR4-2400 DDR4-2400	UHD 630 UHD 630		optional Kensington® MicroSaver® cable; • Boot sequence control				
	Core i3-8100 Core i3-8300	4/4	3.7G	6 MB 8 MB	DDR4-2400 DDR4-2400	UHD 630		 Kensington lock also locks chassis) Smart USB protection, allows keyboard/ Individual USB port disablement 				
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch				
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black				
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black				
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Wouse	Some: Lenovo Galliope Mouse (USB connector), Black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black				
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Mechanical	Business black color				
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Toolless back cover, stand, memory removal				
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Support VESA mount (100mm)				
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Dimensions (WxDxH) Max weight (lb / kg) Adjustments				
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Without stand (No camera): 19.3 X 1.9 X 13.5 (inch) (Touch) 11.6 / 5.25				
Memory	32GB max (16GB SC	D-DIMM c	nly available via	special b	oid models), DDR	4-2666*,		19.3 X 1.9 X 13.5 (inch) (Touch) 11.6 / 5.25 N/A 491 X 49 X 342 (mm) (Non-touch) 11.1 / 5.05				
	two 260-pin SO-DIMN		•					With Full Function Monitor stand (No camera):				
	* System clocks dowr	n for the p	processors with lo	ower me	mory controller			19.3 V 9.9 V 14.8 to 19.1 (inch) Tilt: 45° back, -5° forward;				
Storage	Some: Hard Drive / S	SATA 6.00	Gb/s, 2.5", 5400	rpm or 7	200 rpm			491 X 252 X 377 to 486 (mm) (Non-touch) 15.8 / 7.18 Lift: 110mm; Swivel: +/-45°				
	Some: Solid State D Some: M.2 SSD (224	rive (SSE	0) / SATA 6.0Gb/s	s, 2.5"	v2 or PClo 2 0 v	4		With UltraFlex III stand (No camera):				
	Some: Intel Optane	+∠ / ∠∠ou ^M Memory	v (not support Ce	eleron / F	Pentium Processo	+ or). M.2		Tilt: 70° back, -5° forward;				
Optical	Some: DVD-ROM SA	ata 1.5G	ib/s Drivė, slim (9	.0mm)		.,,		19.3 X 9.9 X 13.2 to 16.4 (inch) (Touch) 17.3 / 7.85 Lift: up to 136mm (flat mode) /				
Madia raadar	Some: DVD Burner (Optional 3-in-1 media	(DVD±RV	V), SATA 1.5Gb/s	Drive, s	slim (9.0mm)			491 X 252 X 335 to 417 (mm) (Non-touch) 16.9 / 7.65 up to 82mm (vertical mode); Swivel: +/-45°				
Media reader	'			main m	amarı DiraatV® 1	0						
Graphics	Intel HD Graphics 6 ⁻ external monitor supp			main me	emory, DirectX 1	2,	Power supply	150 watts, autosensing, 90% PSU				
Display	Max resolution: 4096. 21.5" (546.1mm) Full	x2304 (D	P)@60Hz, 1920:	k1080 (P	anel)@60Hz or. Borderless de	sian.	Limited warranty ³	Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available				
-17	TFT-LCD. In-Plane Sv	witchina t	echnology (In-Pla	ane Swit	ching may refer to	o IPS.	Preload	Preloaded operating system				
	PLS, ADS, AHVA, and	d AA), wi	de viewing angle	(+/- 89°), LED backlight,	250 nits,		Some: Windows 10 Pro 64-bit				
Multi-touch	16:9 aspect ratio, 100 Optional multi-touch,	o:1 conti supports	rast ratio, anti-gia : 10-point. AIT (A	re, supp dvanced	ort Low Blue Ligr In-cell Touch) ted	nt Mode chnology		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)				
Camera	Optional 1080p came	ra. with c	dual microphone.	LED ind	licator, physical s	witch on/		Lenovo Vantage				
Controlo	off, supports multi-de Physical buttons on s	gree rota	tion (horizontal 0	° to 180°	°, vertical -25° to	25°)		Microsoft Office preloaded; purchase a product key to activate				
Controls		ide idi ili	icropriorie mute a	and powe	21 011/011			 Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 				
Chipset	Intel B360 Chipset							LinkedIn				
Rear ports*	Four USB 3.1 Gen1 (one supp	orts Smart Powe	er On), oi	ne ethernet (RJ-4	l5),	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,				
Side ports*	one DisplayPort, one one USB 3.1 Gen2 (o			charge)	one USB 3.1 Tvn	e-C Gen 1		TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified				
oldo porto	one optional card rea							(for Full Function Monitor Stand only), TUV Low Blue Light certified,				
Mosaudalat	* Depending on many far Two M.2 Card slots (c	ctors, actu	al data transfer spe	ed may b	e lower than theore	tical speed	MIL ODEO to at	TUV Ultra Low Noise certified (on some models), RoHS-compliant				
M.2 card slot Audio support	Two M.2 Card slots (c						MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)				
adio oappoit	Dolby [®] Audio™ Premi				.a. opoditoro (244	·· =/,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				













ThinkCentre M910z Platform Specifications

Processor	Intel® Celeron®, Int	tel Pentiur	m®, or 6th / 7th G	en Intel	Core™ i3 / i5 / i7 I	Processor	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified					
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	1 ' '	* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS					
		Threads	· /		(Up to)	Graphics HD 530	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Boot sequence control 					
	Core i3-6100 Core i5-6500	2/4	3.7G 3.2G / 3.6G	3 MB 6 MB	DDR4-2133 DDR4-2133	HD 530	-	Kensington lock also locks chassis) • Boot without keyboard and mouse					
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	-	Smart USB protection, allows keyboard/ Individual USB port disablement Chicago Characteristics and the second control of the second control o					
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	1	mouse only, blocks all storage devices Optional Chassis intrusion switch Optional cable lock to physically lock					
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	1	keyboard and mouse					
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black					
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	1	Some: Lenovo Traditional Keyboard (USB connector), black					
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black					
Memory	32GB max, DDR4	-2400*. tw	o 260-pin SO-D	IMM soci	kets. dual-channe	l capable	INIOUSE	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black					
,	* System clocks do		•				Mechanical	Business black color					
Storage	Some: Hard Drive	e / SATA 6 e Drive (S	.0Gb/s, 2.5", 540 SD) / SATA 6.0G	00 rpm oi b/s, 2.5"	7200 rpm		Medianical	Toolless back cover, stand, disk, memory removal Support VESA mount (100mm)					
	Some: M.2 Solid	State Driv	e (SSD) / PCIe N	√VMe, P				Dimensions (WxDxH) Max weight (lb / kg) Adjustments					
Optical	Some: Intel Optar Some: DVD-ROM	ne™ Mem ⁄ISΔTΔ 1 Æ	ory (models with 5Gh/s Drive, slim	7th gen	Core processor),	M.2		Without stand: 23.0 X 1.8 X 15.4 (inch); (Touch) 17.2 / 7.8					
Optical	Some: DVD-NON	er (DVD±	RW), SATA 1.5G	b/s Drive) e, slim (9.5mm)			584 X 45 X 590 (mm) (Non-touch) 15.0 / 6.8					
Media reader	Optional 9-in-1 me	edia card r	eader			10	_	With Basic 23.0 X 9.6 X 18.0 (inch); (Non-touch) 19.4 / 8.8 Tilt: 45° back, -5° forward					
Graphics	Intel HD Graphics external monitor so	upport via	in processor, us DisplavPort™:	es main	memory, DirectA	12,		Tilt: 61° back,					
	Max resolution: 40)96x2304	(DP)@60Hz, 192					With UltraFlex 23.0X 10.0 X 19.9 (inch); (Touch) 22.7 / 10.3 -5° forward; II stand: 584 X 253 X 505 (mm) (Non-touch) 20.7 / 9.4 Lift: 110mm;					
Display	23.8" (604.5mm) F	Full HD 10	080p (1920x108	0) TFT c	olor, WVA panel,	wide viewing	1	Swivel: +/-45°					
	angle (+/- 89°), LE anti-glare, support	:D backlig :Low Blue	nt, 250 nits, 16:9 Light Mode wo	aspect i rk as sta	atio, 1000:1 conti ndalone monitor v	ast ratio,	Power supply	150 watts, autosensing, 85% PSU					
	DisplayPort (DP in			ik as sia	ridaione monitor v	πα							
Multi-touch	Optional Projected	l Capacitiv	ve Touch (PCT) t	echnolog	y, supports 10-po	oint touch	Limited warranty ³	3 Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available					
Camera	Optional 1080p ca switch on/offf	mera, fixe	ed focus, with dua	al microp	none, LED indica	tor, physical	Preload	Preloaded operating system Preloaded applications (only some					
Controls	Physical buttons for and power on/off	or Microph	none mute, monit	or mode	switch, brightnes	s up/down,	ricioad	Some: Windows® 7 Professional 32/64 listed) preinstalled through downgrade • Microsoft Office preloaded;					
Chipset	Intel Q270 Chipse	et					-	rights in Windows 10 Pro 64-bit purchase a product key to activate					
Rear ports*	Four USB 3.1 Gen	1, etherne	et (RJ-45), Displa	ayPort in	out combo port,			Some: Windows 10 Pro 64-bit - Only for Window 10 - Lenovo Companion					
	optional serial (9-p							- Only for Window 7					
Side ports*	Two USB 3.1 Gen one headphone / r	1 (one is A	Always On and ta	st charg	e), optional card r	reader,		Lenovo Solution CenterLenovo ThinkVantage Tools					
	* Depending on many							ThinkVantage System Update					
M.2 card slot	Two M.2 Card slot					romour opeou		Create Recovery Media					
Audio support	High Definition (HI	D) Audio,	Realtek ALC233	/ two inte	ernal speakers (3'	W x 2),	1	Adobe® Reader® Cubadiak PayerPVD Create					
	Dolby [®] Audio™ cer	rtified				, ,		 Cyberlink PowerDVD Create (DVD±RW) 					
WLAN ¹³	Some: 11ac wirel				QCA9377A (dua	l band),	Environment	EPEAT™ Gold rating (North America); ENERGY STAR® 6.1; TCO AIO Computer					
			1 combo adapte		OCA6174A /	l band\		Certified; ULE Gold; ErP Lot 3; GREENGUARD® certified; RoHS-compliant					
	Some: 11ac wirel Wi-Fi + Blı		Jard, Qualcomm 1 combo adapte		QCA6174A (dua	i bana),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,					
	Some: 11ac wirel				eless-AC 3165,			Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)					
	Wi-Fi + Blu Some: 11ac wirel	uetooth 4. ess, M.2 (1 combo adapte Card, Intel Dual E	r, 1x1 Band Wir	•		Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com					
			1 combo adapte		alaaa AC gage								
	Some: 11ac wirel Wi-Fi + Blı				eiess-AC 8265, Pro technology su	pport. 2x2							
Bluetooth™	Some: Bluetooth 4	I.1 wireles	ss, integrated in V	Vi-Fi + B	luetooth combo a	dapter							
Ethernet	Gigabit ethernet, In	ntel Ether	net Connection I	219-LM	(Jacksonville), Wa	ke on LAN®]						
Manageability	Intel Active Manag Intel vPro technolo	gy on sor	ne modéls (requ	ire choos	sing a vPro-suppo	ort Wi-Fi							
	adapter to enable	vPro func	tion through wire	less con	nection)								
See footnotes for	more detailed informa	ation						© Lenov					

















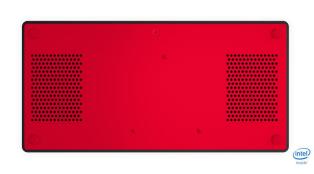


ThinkCentre M920z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	eries	Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2),			
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			Dolby® Audio™ Premium			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	-	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1			
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	-	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265,, 2x2			
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),			
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Bluetooth™	Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter			
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®			
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12.0 (Intel AMT 12.0);			
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Managoasiity	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi			
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	O a security of the	adapter to enable vPro function through wireless connection)			
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified			
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable: Boot sequence control 			
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	-	Kensington lock also locks chassis) Boot sequence control Boot without keyboard and mouse			
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	-	 Smart USB protection, allows keyboard/ Individual USB port disablement 			
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch			
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	_	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	Core i3-9300 4 / 4 3.7G / 4.3G 8 MB DDR4-2400 UHD 63 Core i5-9400 6 / 6 2.9G / 4.1G 9 MB DDR4-2666 UHD 63						Mouse	Some: Lenovo Calliope Mouse (USB connector), black			
	Core i5-9400	6/6	2.9G / 4.1G 3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	-	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
	Core i5-9500 Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Mechanical	Business black color			
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	-	 Toolless back cover, stand, disk, memory removal Support VESA mount (100mm) 			
Mamari								Dimensions (WxDxH) Max weight (lb / kg) Adjustments			
Memory	32GB max (16GB SC two 260-pin SO-DIM	M sockets	, dual-channel c	apable	,.	4-2000 ,		Without stand (No camera):			
	* System clocks down for						_	21.3 X 1.8 X 13.7 (inch) (Touch) 14.0 / 6.34 N/A			
Storage	Some: Hard Drive /							542 X 46 X 349 (mm) (Non-touch) 13.5 / 6.13 With Full Function Monitor stand (No camera):			
	available via			RAIDU/ I	support (RAID pr	eset only		21.3 X 9.9 X 15.9 to 20.2 (inch) (Non-touch) 18.2 / 8.26 Tilt: 45° back, -5° forward; 542 X 252 X 405 to 514 (mm) (Non-touch) 18.2 / 8.26 Lift: 110mm; Swivel: +/-45°			
	Some: Solid State D	rive (SSD) / SATÁ 6.0Gb/s	s, 2.5"							
	Some: M.2 SSD (22	42 / 2280) / PCIe NVMe, F	PCIe 3.0	x2 or PCle 3.0 x4	1		With UltraFlex III stand (No camera):			
Optical	Some: Intel Optane ^T Some: DVD-ROM S				entium Processo	r), M.2		Tilt: 70° back, -5° forward;			
Optical	Some: DVD-ROW S	(DVD±RV	V). SATA 1.5Gb/s	Drive. s	lim (9.0mm)			21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Lift: up to 136mm (flat mode) / up to 542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 81mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 136mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 136mm (vertical mode); Swivel: +/-45° Lift: up to 136mm (flat mode) / up to 1			
Media reader	Optional 3-in-1 media	a card rea	der	, 2, 0							
Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,	Power supply				
	external monitor supp	oort via D	isplayPort™;		-						
Display	Max resolution: 4096 23.8" (604.5mm) Ful	II HD 108	Op (1920x1080)	TFT cold	or, Borderless des	sign,	Limited warranty ³	 Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available 			
	In-Plane Switching to	echnology	(In-Plane Switch	ning may	refer to IPS, PLS	S, ADS,	Preload	Preloaded operating system			
	AHVA, and AA), wide ratio, 1000:1 contrast	viewing a	angle (+/- 89°), L i-glare, support l	.ED back	dight, 250 nits, 16	:9 aspect		Some: Windows 10 Pro 64-bit			
	alone monitor via Dis	plavPort	DP in / out comb	20W Dide	Light Mode, wor	n as stariu-		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
Multi-touch	Optional multi-touch.	supports	10-point, AIT (A	dvanced	In-cell Touch) ted	hnology		Lenovo Vantage			
Camera	Some: 1080p came	ra, with du	al microphone, l	ED indic	cator, physical sw	itch on/off,		Microsoft Office preloaded;purchase a product key to activate			
		_	,		180°, vertical -25	,		 Cyberlink PowerDVD (only for models with DVD / DVD±RW) 			
	Some: RGBIR came supports mul	ti-degree	rotation (horizon	tal 0° to	180°, vertical -25	° to 25°)		Cyberlink Power2GO (only for models with DVD±RW) Linked In			
	Windows He	llo suppor	t, only available [,]	via speci	al bid models	,	For the contract	• LinkedIn			
Controls	Physical buttons on s	side for mi	crophone mute a	and powe	er on/off		Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3, TCO AIO Computer certified, GREENGUARD® certified,			
Chipset	Intel Q370 Chipset							TUV Eye comfort certified, TUV Low Blue Light certified,			
Rear ports*	Four USB 3.1 Gen1 (5),		TUV Ultra Low Noise certified (on some models), RoHS-compliant			
Side ports*	one DisplayPort in/ou one USB 3.1 Gen2 (c					n1, one	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)			
•	USB 3.1 Type-C Gen						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
	combo jack (3.5mm) * Depending on many fa	otoro oct	al data transfer ass	ad may b	a lawar than the aret	tical apped					
M.2 card slot	Two M.2 Card slots (one for W	LAN, one for SS	D/Optane	e lower man meorer 9)	livai speed					



















ThinkCentre M90n-1 Nano Platform Specifications

Processor	Intel® 8th Generation	Intel Core	e™ i3 / i5 / i7 Pro	cessor			Manageability	Intel vPro technology	on some models	(require choosing	a vPro-support Wi-Fi
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	adapter to enable vP Discrete TPM 2.0, TO	Pro function through CG Certified		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620	Security features	• Security slot (in rea	control		
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		Kensington® Micro	yboard and mouse		
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		Chassis intrusion sPower-on passwor		 Individual USB Smart USB pro- 	port disablement tection, allows keyboard/
	Core i7-8665U	4/8	1.9G / 4.8G	8 MB	DDR4-2400	UHD 620		Administrator pass			cks all storage devices
Memory	8GB or 16GB / DDR						Keyboard	 Hard disk passwor Some: Lenovo Callie 	Κ		
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane	2 SSD 5D / PCIe I 5D / PCIe I ™ Memory	NVMe, PCIe 3.0 NVMe, PCIe 3.0	x 4* x 2 State St			Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello suppor Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
RAID Optical	* M.2 SSD / Optane with RAID 0/1 support (R. None	h SSD in Po AID prese	Cle 3.0 x 2 M.2 slot t only available v	t can only ia speci	al bid model)		Mechanical	Nano (0.35L), black color; metal case Three M.2 slots: two for M.2 SSD (one PCIe 3.0 x4 and one PCIe 3.0 x2) a for WLAN			
Graphics	Intel UHD Graphics	620 in pro	cessor, uses ma	ain mem	ory, DirectX® 12,	one			Dimension	ns (WxDxH)	Weight (Approx.)
	DisplayPort™, one U displays; Max resolution: 4096	,,		' '	, , ,	ndependent	Mounting	M90n-1 Nano (with fan, 0.35L)	7.05" X 3.4	46" X 0.87" 3mm X 22mm	1.11 lb (0.505 kg), vary by config
Monitor cable	Optional DP to VGA HDMI dongle, Type-C	dongle,`Dl	o to HDMI dongle			, Type-C to		Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75mm			
Chipset	Intel SoC (System of						Floor Stand	Some: DIN rail mount bracket kit None			
Front ports (Std.)	* 2x USB 3.1 Gen2, 1) jack (3.5mm)	(USB 3.1	Type-C Gen 2, o	ne head	lphone / microph	one combo	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (Not for TIO models)			
Rear ports (Std.)	* 2x USB 3.1 Gen2, 1x power-in [20V and >4 * Depending on many f	45W]), 1x	eťhernet (RJ-45)	, 1x Dis	pláyPort ´ '		Limited warranty		ted onsite service	e / service upgrade	es available
Audia augaset	Realtek ALC233VB /			eeu may	be lower than theor	elicai speed	Preload	Preloaded operatin	g system		
Audio support WLAN	Some: 11ac wireless	s, M.2 Car	d, Realtek RTL8		(dual band),			Some: Windows® 1 Some: Windows 10	0 Pro 64-bit Home 64-bit		
	Some: 11ac wireles	s, M.2 Cai	ombo adapter, 1 d, Realtek RTL8 ombo adapter, 2	822CE	(dual band),		Environment	ENERGY STAR® 7.1 TUV ultra low noise			ca), ErP Lot 3, TCO 8.0, EEE, REACH
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Car tooth 5.0 c	d, Intel Wireless ombo adapter, 1	-AC 946 x1	, , , , , , , , , , , , , , , , , , , ,		MIL-SPEC test				re, Low Temperature, Shock, Solar Radiation)
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Cai tooth 5.0 c	d, Intel Wireless ombo adapter, 2	-AC 956 x2			Accessories	For compatible acces			
		cooth 5.0 c	ombo adapter, Ir	ntel vPro	tèchnology sup	port, 2x2					
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Inte					e on LAN®					
Note: The specifics	ations above may not be	available	in all regions								Lenovo, July 2019



















ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th	h Generati	on Intel Core™ i3	Proces	ssor		Manageability	ecurity chip Discrete TPM 2.0, TCG Certified						
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security chip							
	Celeron 4205U	Threads 2/2	Base/Max(GHz)	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security features	Security slot (in rear for optional Kensington® MicroSaver® cable) Boot sequence control Boot without keyboard and mouse						
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2133 DDR4-2400	UHD 620		Chassis intrusion switch Individual USB port disablement						
NA						0110 020	<u> </u>	Power-on password						
Memory	4GB / DDR4-2666* / * System automatica					ory controlle		Administrator password Hard disk password						
Storage	* M.2 SSD / Optane with	SD / PCIe I SD / PCIe I ™ Memory 3.0 x 4 (no th SSD in Po	NVMe, PCIe 3.0 H10 with Solid Sot support Celero Cle 3.0 x 2 M.2 slot	x 2 State St n) can only	run at PCle 3.0 x2		Keyboard Mouse	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, bl. Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black						
RAID Optical	RAID 0/1 support (R. None	AID prese	t only available v	ia speci	al bid model)		Mechanical	Nano (fanless 0.55L), black color; metal case						
Graphics	Intel UHD Graphics DisplayPort™, one U							Four M.2 slots: two for M.2 SSD (one PCle 3.0 x4 and one PCle 3.0 x2), one for WLAN, and one for WWAN						
	displays;	3D 3.1 1y	De-C Genz with C	iispiay ii	unction, up to 2 ii	пиерепиет		Dimensions (WxDxH) Weight (Approx.)						
Monitor cable	Max resolution: 4096 Optional DP to VGA	dongle, DI	P to HDMI dongle			, Type-C to		M90n-1 Nano IoT (fanless, 0.55L) 7.05" X 3.46" X 1.36" 179mm X 88mm X 34.5mm 1.58 lb (0.72 kg), vary by config						
Object	HDMI dongle, Type-C						Mounting	Some: VESA mount bracket kit, supports VESA 75mm						
Chipset	Intel SoC (System o				,			Some: VESA mount bracket kit with adaper holder, supports VESA 75mm Some: DIN rail mount bracket kit						
. , ,	* 2x USB 3.1 Gen2, 1x jack (3.5mm), 2x seri	ial					Floor Stand	None						
Rear ports (Std.)*	<i>With Celeron:</i> 1x US	SB 2.0, 1x	USB 3.1 Type-C	Gen 2 (with display funct	tion, suppor	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU						
	With Core i3: 1x US	er-in (20v, : SB 3.1 Ger	> 45vvj), 1x etne 12, 1x USB 3.1 Tv	rnet (RJ /pe-C G	-45). TX DISDIAVE	y function,		Some: 65 watts AC/DC adapter (wide temperature), autosensing, 88% PSU (or for Machine Type 11AS)						
	* Depending on many f	factors, actu	ial data transfer spe	ed may	be lower than theor	etical speed	Limited warranty							
Audio support	Realtek ALC233VB /	/ internal s	peaker (1watt)				<u> </u>	Some: 3-year, limited onsite service / service upgrades available						
WLAN	Some: 11ac wireles	tooth 5.0 c s, M.2 Cai	combo adapter, 1	x1 822CE	, , ,		Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)						
		tooth 5.0 c	combo adapter, 1	x1	, ,,		Environment	ENERGY STAR® 7.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO 8.0 TUV ultra low noise verified (on some models), RoHS, WEEE, REACH						
		tooth 5.0 c	combo adapter, 2	x2	, , , , , , , , , , , , , , , , , , , ,		MIL-SPEC test	MIL-STD-810H (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation)						
		ne: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2						For compatible accessories, please go to http://smartfind.lenovo.com						
Bluetooth Ethernet	Some: Bluetooth 5.0 With Celeron: Gigab With Core i3: Two g	O wireless, oit etherne	integrated in Wi t, Realtek RTL81	Fi + BT 11K, 1x	combo adapter RJ-45, Wake on	LAN®	Accessories	,						
Note: The enecified	ations above may not be	o ovoiloble	in all regions					Lenovo July 2						













ThinkCentre M710 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5	/ i7 Processor	r Security features	Security slot (in rear for optional	Power-on password	
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)		Coounty Touristo	Kensington® MicroSaver® cable) • Padlock loop	Administrator password Hard disk password	
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ 	Boot sequence control	
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		 mouse only, blocks all storage devices Optional cable lock to physically lock 	Boot without keyboard and mouseIndividual USB port disablement	
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		both keyboard and mouse	Optional chassis intrusion switch	
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB co		
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530	110,000.0	Some: Lenovo Traditional Keyboard (USB	connector), black	
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Calliope Wireless Keyboar	d (2.4GHz via USB receiver), black	
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB conr Some: Lenovo Calliope Wireless Mouse (2		
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Machanical	• SFF (8.4L), black color; metal case	2. TGT 12 VIG GGB 10001V01), SIGGR	
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mechanical	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm >	(290.5mm X 343.5mm	
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		 Approx. 13.2 lb (6.0 kg), weight may vary 		
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		 Toolless cover, disk, optical removal 		
Memory	64GB max, UDIMN dual-channel capa * System automati	ble*			•		r	 Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional b. 	av)	
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" IVMe, P	Cle 3.0 x 4, 32Gb	/s		Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16* Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1* Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1*	< 68mm), PCIe 3.0 x16* < 68mm), PCIe 3.0 x1* < 68mm), PCIe 3.0 x1*	
Optical	Some: Intel Optar Some: DVD-ROM Some: DVD Burn	l SATA 1.5 er (DVD±l	5Gb/s Drive, slim RW), SATA 1.5G	(9.0mm)	101.2		Slot 4: no slot, only bracket for optional port extension* M.2 card slots: Two (one for WLAN, one for SSD/Optane) * Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 slot (x4 card)		
Onboard SATA Media reader	Three onboard SATA 6.0Gb/s connectors Optional 7-in-1 media reader						Floor Stand	optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot Optional system floor stand for vertical orientation		
Graphics	Intel HD Graphics one VGA, two Disp discrete graphics t Max resolution: 40 Some: NVIDIA Ge two Display	olayPort™, o support 96x2304 (eforce® G` /Port, 35 (, supports 3 inde more displays; (DP)@60Hz; 204 r 730 , DirectX 12 vatts;	pendent 8x1536 2, 2GB, F	displays, works a (VGA)@50Hz PCIe 2.0 x8 adapt	long with	т омог одрргу	Some: 180 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 25ome: 1-year or 3-year, depot service / 1-year or 3-year, limited onsite states.	U (only available via special bid) service upgrades available	
Monitor cable	Max resolu Optional DP to VG	<i>tion:</i> 3840 A, DP to I	0x2160 (DisplayP DVI-D (single link	ort)@60 (), DP to	Hz; dual DP, or DP to	HDMI 1.4	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64		
Chipset	Intel B250 Chipse	et						preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel		
Front ports*	Four USB 3.1 Gen	1, optiona	al two USB 3.1 Ty	/pe-C Ge	en 2 (only availabl	e via special				
D +	bid), microphone (3.5mm), h	eadphone (3.5m	im)) 0 (0)			processor)		
Rear ports*	Two USB 3.1 Gen1, two USB 2.0, optional two USB 2.0, serial (9-pin), optional 2nd serial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort							Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit		
	two PS/2 ports (ke	yboard/m	ouse);	1101 (110	10), 0110 1 0, 1, 1111	Diopiayi ort,	,	Preloaded applications (only some		
	additional DisplayF	ort on op	tional graphics o	n some	models			listed)		
Rear audio ports?	Line-in (3.5mm), lii	ne-out (3.	5mm), micropho	ne-in (3.	ōmm)			 Microsoft Office preloaded; 		
ILLL 1004	None * Depending on many	v factors av	rtual data transfer s	eneed ma	, he lower than theo	retical speed		purchase a product key to activate		
Audio support	High Definition (HI				·		1	Only for Window 10Lenovo Companion		
WLAN ¹³	Some: 11ac wirele	, .				,	+	- Only for Window 7		
VVL/AIN			1 combo adapte		QUASSITA (uua	i bailu),		Lenovo Solution Center Lenovo Think/Ventego Teolo		
	Some: 11ac wirele	ess, M.2 (Card, Qualcomm	Atheros	QCA6174A (dua	l band),		Lenovo ThinkVantage ToolsCreate Recovery Media		
			1 combo adapte		ologo AC 0165			Adobe® Reader®		
	Some: 11ac wireld Wi-Fi + Blu		zard, intel Dual E 1 combo adaptel		eless-AC 3165,			Cyberlink PowerDVD Create		
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Sand Wir r. 2x2	•		Environment	(DVD±RW) ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),		
Bluetooth™	Some: Bluetooth	4.1 wirele	ss, integrated in '	Ŵi-Fi + E	T combo adapte	r		ErP Lot 3, GREENGUARD®, RoHS-compliant,		
Ethernet	Gigabit ethernet, F	Realtek R	L8111GN, Wake	on LAN	(B)			TUV low noise verified (on some models)		
Modem	None						Accessories	For compatible accessories, please go to	http://www.lenovoquickpick.com	
Manageability Security chip	None TPM (Trusted Platt * Downgrade to TF				G Win7 32 OS					













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron® Int	tel Pentiu	m® or 6/7th Gen	eration l	ntel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in rear for optional Power-on password		
1 10003301		Cores /	Frequency		Memory Support		Coounty leatures	Kensington® MicroSaver® cable) • Administrator password		
	Processor	Processor Threads Base/Max(GHz) Cache (Up to) Graphics						Padlock loop		
	Celeron G3900	2/2	2.8G	2 MB	DDR4-2133	HD 510		Smart USB protection, allows keyboard Boot sequence control Boot sequence control Boot sequence control Boot without keyboard and makes		
	Celeron G3930	2/2	2.9G	3 MB	DDR4-2133	HD 610		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement 		
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		lock both keyboard and mouse Optional chassis intrusion switch		
	Pentium G4500	2/2	3.5G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	1	Some: Lenovo Traditional Keyboard (USB connector), black		
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, bl		
	Core i5-6400	4/4	2.7G / 3.3G	6 MB	DDR4-2133	HD 530	Mechanical	• SFF (7.4L), black color, metal case		
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		• (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 273.5mm		
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 Approx. 9.37 lb (4.25 kg), weight may vary by configuration Bay 1: Slim external ODD bay 		
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630		Bay 2: 3.5", 1" high, internal, supports 2.5" or 3.5" HDD/SSD (2.5 to 3.5 bracket		
	Core i3-7300	2/4	4.0G	4 MB	DDR4-2400	HD 630		comes with disk)		
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCle 3.0 x16*		
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		Slot 2: low-profile (length < 152mm, height < 64mm), PCle 3.0 x1* M.2 card slots: one for SSD		
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		*Optional rear 2x USB2.0 / parallel occupies one expansion slot		
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Floor Stand	Optional system floor stand for vertical orientation		
Memory	32GB max, UDIMN dual-channel capa	ıble	, ,		,	,	Packaging	(WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500mm Cross weight (approx.) 14.22 lb (6.45 kg)		
	*System automation						Power supply	Some: 180 watts, autosensing, 85% PSU		
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Prive (S	SD) / SATA 6.0G	b/s. 2.5"				Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available		
Optical	Some: DVD-ROM	1 SATA 1.	5Gb/s Drive, slim	(9.0mm)	3	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit		
Onboard SATA	Some: DVD Burn Two onboard SATA			D/S DIIVE	e, Siim (9.0mm)			Some: Windows 10 Pro 64-bit		
Media reader	Optional 7-in-1 me							Some: Windows 7 Professional 32/64 preinstalled through downgrade rights		
Graphics	Intel HD Graphics	s 510/530	/610/630 in proc	essor. us	ses main memory.	DirectX® 12.		in Windows 10 Pro 64-bit(not available with 7th Gen Intel processor)		
	one VGA, one Disp	olayPort™	, supports 2 inde					 Preloaded applications (only some listed) Microsoft Office preloaded; purchase a product key to activate 		
	discrete graphics t	o support	more displays;	01000	(\((\) \(
	Max resolution: 40 Some: NVIDIA Ge	96X216U	(DP)@60HZ; 192 T 730 DirectX 1:	20X 1200	(VGA)@60HZ PCIa 2 0 v8 adant	or		Cyberlink PowerDVD (DVD, DVD±RW)		
	two Display	/Port. 35 \	vatts:	_, _ COD, 1	Oic 2.0 Ao adapt	CI,		 Cyberlink PowerDVD Create (DVD±RW) Only for Window 10 Lenovo Companion Only for Window 7 		
	Max resolu	ition: 3840)x2160 (DisplayF							
Monitor cable	Optional DP to VG	A, DP to	DVI-D (single link	(), DP to	dual DP, or DP to	HDMI 1.4				
Chipset	Intel B250 Chipse	et						Lenovo Solution Center		
Front ports*	Two USB 3.1 Gen	1, micropl	none (3.5mm), or	ne headp	hone / microphon	e combo jacl	₹	Lenovo System Update		
	(3.5mm)		D 0 0					Create Recovery Media Adobe® Reader®		
Rear ports*	Two USB 3.1 Genserial (9-pin), optic	1, two US	B 2.0, optional tv	vo USB 2	2.0, serial (9-pin),	optional 2nd				
	optional external L	JISB to PS	/2 ports cable (fo	r PS/2 k	evboard / mouse)	: Dispiayron	⊢nvironment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, RoHS-compliant, WEEE		
	additional DisplayF	Port on op	tional graphics o	n some	models	,	A	· · · · · · · · · · · · · · · · · · ·		
Rear audio ports	' Line-out jack (3.5n		5 ,				Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com		
IEEE 1394*	None									
	* Depending on many			-			_			
Audio support	High Definition (HI	D) Audio,	Realtek ALC233	/ interna	ıl speaker (1.5 wat	tt)	_			
WLAN ¹³	None									
Bluetooth™	None	Pooltok D		. on I AA	I®					
Ethernet Modem	Gigabit ethernet, F None	neallek K	i Lo i i i min, wake	OIILAN	1					
Manageability	None						1			
Security chip	TPM (Trusted Platt				C Win7 20 OC					
	* Downgrade to TF	IVII.2 TOP	trie models with	win IU D	G WIN/ 32 US					
Note: The enecifica		ha availal	ala in all vaniana					Lenovo January 2		













ThinkCentre M715 SFF Platform Specifications

						lo "					
Processor	AMD A6 / A8 / A10 / A1			/ 5 / 7 series	·	Security features	Security slot (in rear for optional Power-on password Administrator password				
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics		Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse				
	Ryzen 3 PRO 1200	4 / 4	3.1 / 3.4	2MB	None						
	Ryzen 3 PRO 1300	4 / 4	3.5 / 3.7	2MB	None		Optional cable lock to physically lock Individual USB port disablement				
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		both keyboard and mouse Optional chassis intrusion switch				
	Ryzen 7 PRO 1700	8 / 16	3.0 / 3.7	4MB	None	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	PRO A6-8570	2/2	3.5 / 3.8	1MB	Radeon R5 Series	_	Some: Lenovo Traditional Keyboard (USB connector), black				
	PRO A10-8770	4 / 4	3.5 / 3.8	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Mouse (USÉ connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black				
	PRO A8-9600	4 / 4	3.1 / 3.4	2MB	Radeon R7 Series	Mechanical	SFF (8.4L), black color; metal case				
	PRO A10-9700	4 / 4	3.5 / 3.8	2MB	Radeon R7 Series	Moonanicai	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm				
	PRO A12-9800	4 / 4	3.8 / 4.2	2MB	Radeon R7 Series		 Approx. 13.2 lb (6.0 kg), weight may vary by configuration 				
Memory	64GB max, UDIMM, DI dual-channel capable* * System automatically	clocks dowr	for the proces	sors with low	er memory controller		Toolless cover, disk, optical removal Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16* Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1* Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1* Slot 4: no slot, only bracket for optional port extension* M.2 card slots: two (one for WLAN, one for SSD) Optional front USB3.1 Type-C x2 module occupies PCle x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot Optional system floor stand for vertical orientation				
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	/e (SSD) / Ś/	ATA 6.0Gb/s, 2.	5" ່	'						
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), SA	ATA 1.5Gb/s Dr		mm)						
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader									
Graphics	AMD Radeon™ Graph memory, DirectX® 12, c	i cs in proce one VGA two	essor (not for A o DisplayPort™	MD Ryzen p (Onboard VC	rocessor), uses main AA and DP ports						
	are invalid on the mode displays, works along w Max resolution: 4096x2 Some: NVIDIA Gefore	els with AMD vith AMD dis v160 (DP)@6	Ryzen process crete graphics 1 30Hz: 1920x120	sor), supports to support m 10 (VGA)@6	s 3 independent ore displays; 0Hz	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)				
	two DisplayPort Max resolution:	, 35 watts; 3840x2160	(DisplavPort)@	60Hz:		Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available				
Monitor cable	Optional DP to VGA, D	P to DVI-D (s	single línk), ÓP	to dual DP, c	or DP to HDMI 1.4	_	Preloaded operating system Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (Only available with Pro A6/A10/A12-8xxx APUs) Some: Windows 10 Pro 64-bit				
Chipset	AMD B350 Chipset										
Front ports*	Two USB 3.1 Gen2, two available via special bid	o USB 3.1 G d), microphoi	en1, optional tv ne (3.5mm), he	vo USB 3.1 T adphone (3.5	Type-C Gen 2 (only 5mm)						
Rear ports*	Two USB 3.1 Gen1, two	o USB 2.0, o	ptional two US	B 2.0, serial	(9-pin), optional		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)				
	2nd serial (9-pin), optio DisplayPort (not availab	nal parallel (25-pin), ethern	et (RJ-45), o	ne VGA and two		Microsoft Office preloaded;				
	(keyboard / mouse);	ole on model	5 WILL AND THE	zen processo	or), two r 3/2 ports		purchase a product key to activate				
	additional DisplayPort	on optional g	raphics on som	e models			- Only for Window 10 • Lenovo Companion				
Rear audio ports	^t Line-in (3.5mm), line-o	ut (3.5mm), r	microphone-in (3.5mm)			- Only for Window 7				
IEEE 1394*	None * Depending on many factor	ors, actual data	a transfer sneed i	may he lower t	han theoretical speed		 Lenovo Solution Center Lenovo ThinkVantage Tools 				
Audio support	High Definition (HD) Au		·		· · · · · · · · · · · · · · · · · · ·	1	Create Recovery Media				
WLAN	Some: 11ac wireless,			IAE (dual ba	nd),	1	 Adobe® Reader® Cyberlink PowerDVD Create (DVD±RW) 				
	Wi-Fi + Blueton Some: 11ac wireless,	M.2 Card, Q	ualcomm Ather	os QCA6174	A (dual band),	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant				
	Wi-Fi + Bluetoo Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, Q	ualcomm Ather	os QCA9377	' (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 o Gigabit ethernet, Realto None	r 4.1 wireles	s, integrated in		combo adapter						
Manageability Security chip	DASH TPM (Trusted Platform * Downgrade to TPM1.2										













ThinkCentre M720 SFF Platform Specifications

Processor	Intel® Celeron®, Intel I	Pantium®	or 8th / 9th Gon	Intel Co	ore™ i3 / i5 / i7 / i0	Processor		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),		
Fiocessoi	inter Celerons, inter	Cores /	Frequency		Memory Support			Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,		
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter		
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®		
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4 Some: Bitland BN8E88*, gigabit ethernet, PCIe x1 (only available via special bid)		
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		* Choose either I350-T4 or BN8E88		
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	None		
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified		
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630 UHD 630	Security features	Security slot (in rear for optional Power-on password		
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666 DDR4-2666	UHD 630		Kensington® MicroSaver® cable) • Administrator password		
	Core i7-8700 Core i3-9100	6 / 12 4 / 4	3.2G / 4.6G 3.6G / 4.2G	12 MB 6 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control 		
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse		
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		Optional chassis intrusion switch Individual USB port disablement		
	Core i5-9320	6/6	2.9G / 4.1G	9 MB	DDR4-2400 DDR4-2666	UHD 630		Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/mouse only, blocks all storage devices		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	Marrie a a val			
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
Memory	64GB max, UDIMM, [DDR4-260	66. four 288-pin	OIMM sc	ckets, non-FCC.		iviouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black		
	dual-channel capable * System automaticall	*	•			y controlle		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Storage	Some: Hard Drive / S				om or 7200 rpm		Mechanical	SFF (8.4L), black color; metal case		
-	Some: Solid State Dr Some: M.2 Solid State * M.2 SSD (2242) PC	te Drive (Ie NVMe	ŚSD) / PCIe NVI only supports P	Me, PCI Cle 3.0 x	(2, 16Gb/s		Moonanioa	 (WxDxH) 3.64" X 11.44" X 13.52"; 92.5mm X 290.5mm X 343.5mm Approx. 13.24 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical, and extension card removal 		
Optical	Some: Intel Optane™ Some: DVD-ROM SA	4TA 1.5ĞI	b/s Drive, slim (9	.0mm)		r), IVI.2		Optional dust filter Bay 1: Slim external ODD bay		
Onboard SATA	Some: DVD Burner (Three onboard SATA			Dilve, S	aliti (9.011liti)			Bay 2: 3.5", 1" high, internal, HDD/SSD		
Media reader	Optional 7-in-1 media		JOHN GOLOTO					Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 147mm, height < 68.9mm), PCIe 3.0 x16		
Graphics	Intel UHD Graphics 610/630 in processor, uses main memory, DirectX® 12,						1	Slot 2: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1		
·	one VGA, two Display	rPort™, sι	upports 3 indepe					Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1		
	discrete graphics to si			1506 (\/	CA)@E0U-			Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane)		
	Max resolution: 4096x Some: NVIDIA Gefor	ce® GT 7	30. DirectX 12. 2	GB. PC	GA)⊛50⊓2 le 2.0 x16 adapte	er.	Floor Stand	Optional system floor stand for vertical orientation		
	two DisplayPo			,	=	,	Power supply	Some: 180 watts, autosensing, 85% PSU		
Monitor coble	Max resolution	n: 3840x2	160 (DisplayPort)@60Hz	r 	'4a O !! - :	1	Some: 210 watts, autosensing, 85% PSU		
Monitor cable	Optional DP to VGA d Display with intel inted					ior Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Chipset	Intel B360 Chipset	graicu gra	4P11103), 01 D1 10	ו וואוטוי	dollyle		Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available		
Front ports* (Std.)2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x USB 3	.1 Type-	C Gen1 (15W cha	arging),	Preload	Preloaded operating system		
. ,	1x microphone (3.5m)	m), 1x he					i ieloau	Some: Windows® 10 Pro 64-bit		
Front ports* (Opt. Rear ports* (Std.) Optional: 1x media re) 4x USB 2.0, 1x serial	ader (9-pin), 1	x ethernet (RJ-4	5), 1x V(GA, 2x DisplayPo		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
	1x line-out (3.5mm)) Optional: 2x USB 3.1						Lenovo Vantage			
ricai ports (Opt.	(special bid only), 1x 2	2nd seria	1 (9-pin)	36 3.1 1 Il (9-pin)	via PCIe x1. 1x n	arallel (25-		 Microsoft Office preloaded; purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 		
	pin), 2x PS/2 ports (ke	eyboard/r	nouse), addition	al RJ-45	and video ports a	available or	n			
	optional graphics or e	thernet c	ard		·					
	* Depending on many fac ** Choose either 2x USB					ical speed		• LinkedIn		
Audio support	High Definition (HD) A					tt)	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,		
WLAN	Some: 11ac wireless.					/		TUV low noise verified (coming soon, on some models), RoHS-compliant		
V V L / N N			ombo adapter, 1		adai band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		













ThinkCentre M720e SFF Platform Specifications

Dragger	Intol® Coloron® Intol	Dontium®	or Oth / Oth Con	Intal Ca	*oTM :0 /:E /:7 /:0	Dragge	Managashilitu	None
Processor	Intel® Celeron®, Intel			inter Co	Υ		Security chip	None Discrete TPM 2.0, TCG Certified
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Graphics		s • Security slot (in rear for optional • Power-on password
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	Coccurity locatures	Kensington® MicroSaver® cable) • Administrator password
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		 Padlock loop Hard disk password
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Smart USB protection, allows keyboard/ Boot sequence control Death without heads and and and and and and and and and and
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		lock both keyboard and mouse • Optional chassis intrusion switch
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610		Some: Lenovo Traditional Keyboard (USB connector), black
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Mechanical	SFF (7.4L), black color, metal case
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		• (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 274.8mm
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		 Approx. 9.37 lb (4.25 kg), weight may vary by configuration Bay 1: Slim ODD bay
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Bay 2: 3.5" disk bay, supports 2.5" HDD (2.5 to 3.5 bracket comes with 2.5" disk)
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCIe 3.0 x16*
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Slot 2: low-profile (length < 152mm, height < 64mm), PCle 3.0 x1*
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		M.2 card slot: one for SSD *Optional rear 2x USB2.0 / parallel occupies one expansion slot
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Floor Stand	Optional system floor stand for vertical orientation
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Packaging	• (WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500mm
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	l ackaging	• Cross weight (approx.) 14.48 lb (6.57 kg)
Memory	32GB max, UDIMM, I	DDR4-26	66*. two 288-pin	DIMM so	ockets, non-ECC.		Power supply	180 watts, autosensing, 85% PSU
,	dual-channel capable		, p				,	5
	* Memory may be und processor	derclocke	d to DDR4-2400	for the lo	ower memory con	itroller in	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Storage	Some: Hard Drive / S	SATA 6.00	3b/s. 2.5" or 3.5"	5400 rp	m or 7200 rpm		Preload	Preloaded operating system
oto.ugo	Some: M.2 Solid Sta	te Drive (SSD) / PCIe NVI	Me. PCle	3.0 x2 or PCle 3	3.0 x4		Some: Windows 10 Pro 64-bit
Optane memory	Some: Intel Optane	Memory	, M.2 2280, PCI	NVMe,	PCle 3.0 x 2			Some: Windows 10 Home 64-bit Some: Linux Ubuntu
Optical	Some: DVD-ROM Some: DVD Burner (lim (0 0mm)		Environment	
Onboard SATA	Two onboard SATA 6.			Dilve, 3	1111 (3.011111)		Environment	ENERGY STAR® 7, EPEAT™ Silver rating (North America), ErP Lot 3, RoHS-compliant, WEEE
Media reader	Optional 7-in-1 media						Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
Graphics	Intel HD Graphics 6						Accessories	To companione accessories, please go to mtp.//www.lenovoquickpick.com
•	one VGA, one Display			ndent dis	splays, works alo	ng with		
	discrete graphics to s Max resolution: 4096	upport m	ore displays; .D\@eo⊔ 2049;	/1526 (\/	CV/@20H2			
	Some: AMD Radeon	™ 520 . D	irectX 12, 2GB G	DDR5. F	PCle 3.0 x8 adap	ter.		
	one VGA, one	HDMI, 3	0 watts (Max);		·			
Monitor cable	Max resolution	n: 3840x2	160 (HDMI)@30	Hz; 2048	8x1536 (VGA)@8	5Hz		
	Optional DP to VGA,	אם 10 אם	ו-ט (single link), ו	JP to au	al DP, or DP to H	DIVII 1.4	_	
Chipset	Intel B365 Chipset							
Front ports* (Std.) Two USB 3.1 Gen1, r	nicrophor	ne (3.5mm), one	headpho	ne / microphone	combo jack	<	
Front ports* (Opt.	(3.5mm)							
	Two USB 3.1 Gen1, to	wo USB 2	2.0. serial (9-pin)	etherne	t (RJ-45), one VC	A. one		
. , ,	DisplayPort, Line-out	jack (3.5)	mm)		, ,,	•		
Rear ports* (Opt.)	optional two USB 2.0), optional		
	external USB to PS/2 additional video ports					ma modale		
	* Depending on many fa]	
Audio support	High Definition (HD)					ai opoou	1	
WLAN ¹³	None	tadio, i le	anon ALOUZU / II	nomai S	Jounes (2 Wall)		-	
Bluetooth™	None							
Ethernet	Gigabit ethernet, Rea							
Ethernet (Opt.)	Some: Bitland BN8E	88*, gigal	oit ethernet, PCI	x1				
Modem	None							













ThinkCentre M725 SFF Platform Specifications

Processor	AMD A6 / A8 / A10	/ A12 and	d Ryzen 3 /	5 / 7 series	processor		Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®				
-				L2/L3	Memory	Integrated	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)				
	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Support	Integrated Graphics	Manageability	DASH 10/1.1				
	PRO A6-9500	2/2	3.5 / 3.8	1MB	(Up to) DDR4-2400	Radeon R5	Security chip	Discrete TPM 2.0, TCG Certified				
	PRO A6-9500 PRO A8-9600	4/4	3.5 / 3.8	2MB	DDR4-2400 DDR4-2400	Radeon R5	Security features	Security slot (in rear for optional Power-on password				
	PRO A10-9700	4/4	3.5 / 3.8	2MB	DDR4-2400	Radeon R7		Kensington® MicroSaver® cable) ● Administrator password				
	PRO A12-9800	4/4	3.8 / 4.2	2MB	DDR4-2400	Radeon R7		Padlock loop Hard disk password Past assumes central				
	Ryzen 3 2300X	4/4	3.5 / 4.0		DDR4-2933	None		Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard and mouse				
	Ryzen 5 2500X	4/8	3.6 / 4.0		DDR4-2933	None		Optional cable lock to physically lock Individual USB port disablement				
	Ryzen 3 PRO 2200G	4/4	3.5 / 3.6	2MB / 4MB		Radeon Vega 8		both keyboard and mouse • Optional chassis intrusion switch				
	Ryzen 5 PRO 2400G	4/8	3.6 / 3.8	2MB / 4MB	DDR4-2933	Radeon RX Vega 11	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Ryzen 5 PRO 2600	6/12	3.4 / 3.9	3MB / 16MB		None	,	Some: Lenovo Traditional Keyboard (USB connector), black				
	Ryzen 7 PRO 2700	8 / 16	3.2 / 4.1	4MB / 16MB	DDR4-2933	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
Memory	64GB max, UDIMM		2666* four '	200 nin DIM	M sockets n	on ECC	Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)				
WEITIOI y	dual-channel capab		2000 , IOUI 2	200-biii Diivi	IVI SOCKEIS, II	ion-Loo,	IVIOUSE	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black				
	* Systemboard supp		o DDR4-26	66. memory	frequency n	nav automatically		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
	clocks down for the							Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)				
Storage	Some: Hard Drive		-				Mechanical	SFF (8.4L), black color; metal case				
	Some: Solid State	Drive (SS	SD) / SATA 6	6.0Gb/s, 2.5		г	ivicoriariicai	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm				
	Some: M.2 SSD / F							 Approx. 13.2 lb (6.0 kg), weight may vary by configuration 				
				nd AMD A6	/ A8 / A10 / .	A12 processor only		Toolless cover, disk, optical removal				
Optical	supports PCle 3.0 > Some: DVD-ROM	C 2, 10GD C ΔTΔ 1 5	Gh/s Drive	elim (9 0mn	2)			Optional dust filter Part 1 Olim paternal OPP have				
Optical	Some: DVD-NOW Some:	r (DVD±F	RW). SATA	1.5Gb/s Driv	e. slim (9.0n	nm)		Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD				
Onboard SATA	Three onboard SAT							Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk)				
	available via specia					•		Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16				
Media reader	Optional 7-in-1 med	dia reade	r					Slot 2: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1				
Graphics	AMD Radeon™ Gra	aphics in	processo	r (only for so	me process	ors), uses main		Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1				
	memory, DirectX® 1	2, one V	GA, two Dis	playPort™ (0	Onboard VG	A and DP ports		Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0				
	are only available of	n the mo	dels with int	egrated grap	ohics), suppo	orts 3 independent	Floor Stand	M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation				
	May resolution: 409	plays, works along with AMD discrete graphics to support more displays; x resolution: 4096x2160 (DP)@60Hz; 1920x1200 (VGA)@60Hz										
	Some: NVIDIA Gef	orce® G1	730 . Direc	tX 12. 2GB (GDDR5. PC	le 2.0 x16 (x8 elec.)	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU				
	adapter, two	DisplayF	Port, 35 wat	ts;		,		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)				
Monitor coble	Max resoluti	ion: 3840	x2160 (Disp	olayPort)@6	0Hz		Lineite ele en entre					
Monitor cable	Optional DP to VGA or DP to HDMI 1.4 of	A dongle, donale	DP to DVI-L) dongle, DF	to dual DP	dongle,	Limited warranty Preload	1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system				
Chipset	AMD B450 Chipse						Fieldau	Some: Windows 10 Pro 64-bit				
Front ports* (Std.)	2x USB 3.1 Gen2, 2	2v LISB 3	1 Gen1 1v	microphone	(3.5mm) 1	v headnhone	1	Some: Windows 10 Home 64-bit				
Tioni ports (Sta.,	(3.5mm)	ZX 00D 0	. i deiii, ix	microphone	(3.311111), 1	x rieaupriorie		Preloaded applications (only some listed)				
) <i>Optionál:</i> 1x media							Lenovo VantageMicrosoft Office preloaded;				
Rear ports* (Std.)	2x USB 3.1 Gen1, 2	2x USB 2	.0, 1x serial	(9-pin), 1x	ethernet (RJ	-45), 1x VGA**,		purchase a product key to activate				
	2x DisplayPort**, 2x			rd / mouse);	1x line-in (3	.5mm), 1x line-out		Cyberlink PowerDVD (only for models with DVD / DVD±RW)				
Rear norts* (Ont	(3.5mm), 1x microp 2 <i>Optional:</i> 2x USB			nin) 1v nara	llel (25-nin)	additional R I-45		Cyberlink Power2GO (only for models with DVD±RW)				
rical ports (Opt.,	and video ports ava	ilable on	optional ara	aphics or eth	ernet card	additional Fib-40		LinkedIn				
	* Depending on many ** only available on the	factore ac	tual data tran	efor enood me		an theoretical speed	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant				
Audio support	High Definition (HD)				al internal s	peaker (1 watt)	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
WLAN	Some: 11ac wireles	ss, M.2 C	ard, Realte	k RTL88210	E (dual ban	d),	1					
	Wi-Fi + Blue	etooth 4.2	2 combo ad	apter, 1x1								
	Some: 11ac wirele				s QCA9377	A (dual band),						
	Wi-Fi + Blue Some: 11ac wirele	etooth 4.2	2" combo ao	apter, 1x1	RE (dual ban	d)						
	Wi-Fi + Blue	etooth 4 2	zaru, nealle 2* combo ac	dapter 2x2	ı∟ (uuai ball	u),						
	Some: 11ac wirele	ss, M.2 C	Card, Qualco	omm Athero	s QCA6174	A (dual band),						
	Wi-Fi + Blue	etooth 4.2	2* cómbo ao	dapter, 2x2		,,						
Bluetooth™	Some: Bluetooth 4											
-	* Hardware support	S B I 4.2,	Dut Win10	HS3 and ea	riier only sup	oports BT 4.1	J					













ThinkCentre M75s-1 SFF Platform Specifications

Processor	AMD Athlon PRO a	nd Ryzer	13/5/7PR	O series pr	ocessor		Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®		
		Cores /	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	None		
	Processor	Threads	(Base/Max)	Cache	Support (Up to)	Graphics	Manageability	DASH 10/1.1		
	Athlon PRO 300GE	2/4	3.4 / 3.4	1MB / 4MB	DDR4-2666	Radeon Vega 3	Security chip Security features	Discrete TPM 2.0, TCG Certified • Security slot (in rear for optional • Power-on password		
	Ryzen 3 PRO 3200G	4/4	3.6 / 4.0	2MB / 4MB	DDR4-2933	Radeon Vega 8		Kensington® MicroSaver® cable) • Administrator password		
	Ryzen 5 PRO 3400G	4/8	3.7 / 4.2		DDR4-2933	Radeon Vega 11		Padlock loop		
	Ryzen 5 PRO 3600	6 / 12			DDR4-3200	None		Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Boot sequence control Boot without keyboard and mouse		
	Ryzen 7 PRO 3700	8 / 16			DDR4-3200	None		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement 		
	Ryzen 9 PRO 3900	12 / 24	3.1 / 4.3	6MB / 64MB	DDR4-3200	None		lock both keyboard and mouse • Optional chassis intrusion switch		
Memory	64GB max, UDIMM dual-channel capab * Memory may be u lower capability of m	le nderclocl	ked to DDR4	-1866, DD	•	,	Keyboard Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black		
Storage	Some: Hard Drive / Some: M.2 SSD (2)	242 / 228	30) / PCIe N'	VMe, PCIe :	3.0 x2 or PC	00 rpm le 3.0 x4		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Optical	Some: DVD-ROM Some: DVD Burner					nm)	Mechanical	• SFF (8.4L), black color; metal case		
	Three onboard SATA	4 6.0Gb/	s connectors	s, RAID 0/1	support (RA	ID ['] preset only	IVIECTIATIICAI	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm		
	available via special Optional 7-in-1 med							 Approx. 13.2 lb (6.0 kg), weight may vary by configuration 		
	AMD Radeon™ Gra			(only for so	ma nrocasso	nre) uses main		 Toolless cover, disk, optical, and extension card removal Optional dust filter 		
	memory, DirectX® 1: are only available or displays, works alor Max resolution: 409 Some: AMD Radeo two DisplayF Max resoluti Optional DP to VGA	n the moding with Al 6x2160 (on™ 520 , Port, 30 w on: 4096	dels with inte MD discrete DP)@60Hz; DirectX 12, vatts (Max); x2160 (DP)@	egrated grap graphics to 2GB GDDF	ohics), suppo support mod 5, PCIe 3.0	orts 3 independent re displays; x8 adapter,	Floor Chand	Bay 1: Slim external ODD bay Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1 Slot 4: low-profile (length < 150mm, height < 68mm), PCl 3.0 M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation		
Chipset	AMD PRO 560 FCH	ł					Floor Stand			
, ,	2x USB 3.1 Gen2, 2 (3.5mm)		.1 Gen1, 1x	microphone	e (3.5mm), 1	x headphone	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Rear norts* (Std.)	2x LISB 3.1 Gen1 (c	ne sunn	ort Smart Po	wer-On), 2	CUSB 2.0, 1	x serial (9-pin), 1x	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available		
Rear ports* (Opt.)	(3.5mm) Optional: 1x media reader 2x USB 3.1 Gen1 (one support Smart Power-On), 2x USB 2.0, 1x serial (9-pir ethernet (RJ-45), 1x VGA**, 2x DisplayPort**, 2x PS/2 ports (keyboard / mous line-in (3.5mm), 1x line-out (3.5mm), 1x microphone (3.5mm) Optional: 2x USB 2.0, 1x parallel (25-pin), additional video ports available on optional graphics card *Depending on many factors, actual data transfer speed may be lower than theoretical simple on the models with integrated graphics						Preload	Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise Some: Linux Ubuntu		
Audio support	High Definition (HD)						Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);		
WLAN	Some: 11ac wireles	s, M.2 C	ard, Realtek	RTL8822C	E (dual band	d),	Acception	ErP Lot 3; RoHS-compliant, WEEE		
	Some: 11ac wireles Wi-Fi + Blue Some: 11ac wireles	ss, M.2 C etooth 4.2 ss, M.2 C	2 combo ada Card, Intel Wi	mm Atheros opter, 2x2 oreless-AC 9		, ,,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
Bluetooth™	Wi-Fi + Blue Some: Bluetooth 4.				-Fi + BT com	nbo adapter				
Diactoon			le in all regio		51 0011	ioo adaptoi		Lenovo, September 201		













ThinkCentre M910 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5 /	/ i7 Processor	Security features	Security slot (in rear for optional Power-on password				
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			Kensington® MicroSaver® cable) • Padlock loop • Administrator password • Hard disk password				
	Core i5-6500	4 / 4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Smart USB protection, allows keyboard/ Boot sequence control 				
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 mouse only, blocks all storage devices Optional cable lock to physically lock Boot without keyboard and mouse Individual USB port disablement 				
	Core i3-7300	2/4	4.0G /	4 MB	DDR4-2400	HD 630		 Optional cable lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch 				
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	rtcyboard	Some: Lenovo Traditional Keyboard (USB connector), black				
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	Mauro	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
Memory	64GB max, UDIMN dual-channel capa * System automatic	bĺe	'		,	•	Mechanical SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 11.92 lb (5.4 kg), weight may vary by configuration					
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" IVMe, P	Cle 3.0 x 4, 32Gb	/s		 Toolless cover, disk, optical, graphic card removal Optional dust filter Bay 1: Slim external ODD bay 				
Optical	Some: Intel Optan Some: DVD-ROM Some: DVD Burne	1 SATA 1.5 er (DVD±l	5Gb/s Drive, slim RW). SATA 1.5G	(9.0mm b/s Drive) . slim (9.0mm)			Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16*				
Onboard SATA	Four onboard SATA available via specia	A 6.0Gb/s al bid mod	connectors, RAI del)	ID 0/1 su	pport (RAID pres	et only		Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1* Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal)*				
Media reader	Optional 7-in-1 me						-	Slot 4: no slot, only bracket for optional port extension* M.2 card slots: Two (one for WLAN, one for SSD/Optane)				
Graphics	one VGA, two Disp discrete graphics to	I HD Graphics 510/530/610/630 in processor, uses main memory, DirectX [®] 1 VGA, two DisplayPort™, supports 3 independent displays, works along with rete graphics to support more displays; ⟨ resolution: 4096x2304 (DP) @ 60Hz; 2048x1536 (VGA) @ 50Hz						* Optional 2 front USB3.1 Type-C ports module occupies PCle x16 (x4 signal optional rear 2x USB2.0 / parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / cable lock / Wi-Fi antenna occupies parallel / 2nd serial / 2				
	Max resolution: 409 Some: NVIDIA Ge	96x2304 ((DP) @ 60Hz; 204 T 730 Direct Y 17	18x1536	(VGA)@50Hz PCIo 2 0 v8 adapt	or	Floor Stand	Optional system floor stand for vertical orientation				
	two Display			2, 2GD, F	Cie 2.0 xo auapi	ei,	Power supply	Some: 180 watts, autosensing, 85% PSU				
Monitor cable		ition: 3840	x2160 (DisplayP	ort)@60 k), DP to	Hz; dual DP, or DP to	HDMI 1.4	Tower suppry	Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)				
Chipset	Intel Q270 Chipse	et										
Front ports*	Four USB 3.1 Gen				en 2 (only availabl	e via special	Preload	Some: 1-year or 3-year, limited onsite service / service upgrades available				
Rear audio ports	Four USB 3.1 Gen optional parallel (2: PS/2 ports (keyboa additional DisplayF	microphone (3.5mm), headphone (3.5mm) USB 3.1 Gen1, optional two USB 2.0, serial (9-pin), optional 2nd serial (9-pin) nnal parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPort, optional two ports (keyboard/mouse); tional DisplayPort on optional graphics on some models in (3.5mm), line-out (3.5mm), microphone-in (3.5mm)						Preloaded operating system Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processes) Preloaded applications (only some listed) Microsoft Office preloaded; purchase a product key to activate - Only for Window 10				
IEEE 1394*	None * Depending on many					retical speed		some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Lenovo Companion - Only for Window 7 Lenovo Companion - Only for Window 7 Lenovo Solution Center				
Audio support	High Definition (HD				<u> </u>	<u> </u>	-	 Lenovo ThinkVantage Tools 				
WLAN ¹³	Some: 11ac wirele Wi-Fi + Blu Some: 11ac wirele	ess, M.2 (uetooth 4. ess, M.2 (Card, Qualcomm 1 combo adapte	Atheros r, 1x1 Atheros	QCA9377A (dual	l band),		 Create Recovery Media Adobe® Reader® Cyberlink PowerDVD Create (DVD±RW) 				
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Band Wir r, 1x1				ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,				
	Some: 11ac wirele Wi-Fi + Blu		Card, Intel Dual E 1 combo adapte		eless-AC 8265,			TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com				
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Band Wir r, Intel vF	Pro technology su	pport, 2x2	, 1000001100	. o. ospanore accessorios, piedes go to international ordinational				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None											
Manageability Security chip	Intel Active Manag Intel vPro technolo adapter to enable v TPM (Trusted Platf * Downgrade to TP	ogy on sor vPro funct form Mod	ne models (requition through wire ule) 2.0, TCG Ce	ire choos less con ertified	sing a vPro-suppo nection)	ort Wi-Fi						



















ThinkCentre M920 SFF Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	Processor	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support		WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),
	Celeron G4900	2/2	3.1G	2 MB	(Up to) DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630		Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Bluetooth	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	,	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Coourity obio	adapter to enable vPro function through wireless connection)
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	 Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Padlock loop Administrator password Hard disk password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard.
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	,	Some: Lenovo Traditional Keyboard (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
Memory	64GB max, DDR4-26 * System automatical						Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 Solid Sta	SATA 6.00 rive (SSD	Gb/s, 2.5" or 3.5" 0) / SATA 6.0Gb/s	, 5400 rp	om or 7200 rpm	•		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
Optical	* 128GB SSD M.2 (2: Some: Intel Optane ^T Some: DVD-ROM, S Some: DVD Burner	242) PCI Memory SATA 1.5€	e NVMe only sup / (not support Ce ab/s Drive, slim (ports PC eleron / P 9.0mm)	Cle 3.0 x 2, 16Gb/ Pentium Processo	's	Mechanical	 SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.23 lb (6 kg), weight may vary by configuration Toolless cover, disk, optical, extension card removal
Onboard SATA	Four onboard SATA 6 available via special b	6.0Gb/s co	onnectors, RAID			only		Optional dust filter Bay 1: Slim external ODD bay
Media reader	Optional 7-in-1 media		,					Bay 2: 3.5", 1" high, internal, HDD/SSD
Graphics	Intel UHD Graphics one VGA, two Display discrete graphics to s Max resolution: 4096: Some: NVIDIA Gefor two DisplayPo	yPort™, su support m x2304 (Di rce® GT 7 ort, 35 wa	upports 3 indepe ore displays; P)@60Hz; 2048; ′30 , DirectX 12, 2	ndent dis 1536 (Ve 2GB, PC	splays, works aloi GA)@50Hz le 2.0 x16 adapte	ng with	Floor Stand	Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane) Optional system floor stand for vertical orientation
Monitor cable	Optional DP to VGA of Display with intel inte	dongle, D	P to DVI-D dong	e, DP to	dual DP dongle (for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 260 watts, autosensing, 85% PSU (only qualifylia via special bid)
Chipset	Intel Q370 Chipset						I the transfer of the second	Some: 260 watts, autosensing, 92% PSU (only available via special bid)
Front ports* (Std.)	2x USB 3.1 Gen2, 2x 1x microphone (3.5m						Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Front ports* (Opt. Rear ports* (Std.)) <i>Optional:</i> 1x media re 4x USB 3.1 Gen1, 1x	ader	•		, ,	,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit
	1x line-out (3.5mm)) <i>Optional:</i> 2x USB 2.0	. 2x USB	3.1 Gen1 via PC	le x1, 2x	USB 3.1 Type-C	Gen2	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant
	via PCIe x4 (special I 1x parallel (25-pin), 2 USB3.1 Type-C Gen additional RJ-45 and * Depending on many fa	oid only), xx PS/2 po 2 / Displa video poi	1x 2nd serial (9- orts (keyboard/m yPort) via PCIe o ts available on c	pin), 4x s ouse), 1x (4 (availa ptional g	serial (9-pin) via F x Thunderbolt 3 (o able on 09/30/201 graphics or ethern	PCIe x1, combo 8), et card	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M600 Tiny Platform Specifications

Processor	Intel® Celeron® F	Processor	N3000 Series or	Intel Penti	ium® Processor	N3000 Series	Keyboard		3 Keyboard (USB connector), Lenov	vo logo																				
	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Memory Types	Integrated Graphics	Mayraa	Some: Ultraslim Plus Wir	erprint Keyboard (USB connector) eless Keyboard (2.4GHz via USB re	eceiver), black																				
	Celeron N3050	2/2	1.6 / 2.16 GHz	2MB	DDR3L-1600	Intel HD	Mouse		USB Mouse, black, Lenovo logo eless Mouse (2.4GHz via USB rece	eiver) black																				
	Celeron J3060	2/2	1.6 / 2.48 GHz	2MB	DDR3L-1600	Intel HD 400	 Mechanical	• Tiny (1L), black color, metal case																						
	Pentium N3700	4/4	1.6 / 2.4 GHz	2MB	DDR3L-1600	Intel HD	Mechanica																							
	Pentium J3710	4/4	1.6 / 2.64 GHz	2MB	DDR3L-1600	Intel HD 405			Dimensions (WxDxH)	Max weight (lb / kg)																				
Chipset			C that integrates In es into a single s			ics, memory		M600 Tiny only (1L)	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.9 lb (1.3 kg)																				
Graphics	Intel HD Graphic twoDisplayPort™ supports triple in	⁴, onė opti	essor, uses main ional 3rd DP (not	memory, D support D	DirectX® 11.1, P to HDMI dong	gle) or VGA,		M600 Tiny (1L) with VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	4.12 lb (1.87 kg)																				
	Maximum resolu 1920x1080(DP t	ition: 3840 o VGA do	0x2160(ĎP)@30H ngle)@60Hz; 192	Hz; 1920x1 20x1080(D	200(optional VOP to DVI dongle	GA)@60Hz; e)@60Hz;		M600 Tiny (1L) with VESA mount & I/O box	7.42" X 7.30" X 2.62" 188.4mm X 185.38mm X 66.6mm	3.53 lb (1.6 kg)																				
Monitor cable	3840x2160(DP to V		ongle)@30Hz o DVI-D (single lir	nk), or DP	to HDMI 1.4 do	ngle	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation																						
Memory	8GB max / DDR socket	3 Low Vol	tage, DDR3L-160	00, non-pa	rity, one 204-pir	SO-DIMM	Power supply		autosensing, 88% PSU (not include																					
Storage Optical	Some: 500GB (NAND fl Some: Solid Sta Some: external	(5400 rpm ash memate Drive ODD box	r 7200 rpm, SATA n) Solid State Hyb ory, SATA 6.0Gb/s (SSD) / SATA 6.0 c with DVD-ROM, c with DVD±RW, 9	orid Drive (s, 2.5" wid Gb/s, 2.5" 9.5mm hig	SSHD) / with 80 e Wide gh, via USB	GB MLC	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service, OID (Onsite International Delivery) / service upgrades available For Lenovo service upgrade options, please go to S-TC sheet																						
Onboard SATA Media reader	Some: external Some: external	ODD box	(for TIO) with DV (for TIO) with DV one connectors or	/D-ROM, 9 /D±RW, 9.	5.5mm high, via	USB JSB	Preload	Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64-bit Some: Windows 7 Professional 64																						
Front ports*	Two USB 3.0 (or	ne is Alwa	ys On and fast ch	narge), one	e microphone (s	tereo, 3.5mm)		Some: Windows 10 Pro Some: Windows 10 Hom	64-bit																					
Danumantak	one headphone	/ microph	one combo jack (stereo, 3.5	imm)			Preloaded applications (or																						
Rear ports*			0 (optional extern					 Desktop Power Manage 																						
	one optional por	pecific USB on some models), ethernet (RJ-45), two DisplayPort, port (VGA, 3rd DP, or serial on some models), one headphone						Lenovo Solution Center Lenovo REACHit																						
I/O box*			extends two USE																											
	rear, two USB 2.	.0 on front	t, via USB (occup actual data transfe	y two spec	the lower than the	M600 Tiny)		Lenovo SHAREitLenovo Bluetooth Lock																						
Audio oupport						·	-	McAfee® LiveSafe™ (30)																						
Audio support WLAN ¹³		High Definition (HD) Audio, Realtek ALC223 / optional internal speaker (1 watt)																	 Microsoft Office preload purchase a product key 											
WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821AE (dual band), Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band),										 PowerDVD Create (DVI) 	D±RW)																		
								 Lenovo ThinkVantage To 	pols [′]																					
			4.1 combo adapt					- Only for Window 10	210)																					
	Some: 11ac wir	eless, M.2	2 Card, Qualcomr 4.1 combo adapt	m Atheros	QCA6174 (dua	l band),		Lenovo Companion (WiCyberlink PowerDVD (D																						
			2 Card, Intel Dual		eless-AC 3165.			 Lénovo QuickOptimizèr 																						
	Wi-Fi + E	Bluetooth	4.0 combo adapt	er, 1x1				- Only for Window 7																						
			2 Card, Intel Dual		eless-AC 8260,			Rescue and RecoveryPassword Manager																						
Bluetooth™			4.1 combo adapt		i-Fi + BT combo	adanter		ThinkVantage System U	Jpdate																					
Ethernet Modem	One gigabit ethe	Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter One gigabit ethernet port, Realtek RTL8111GN, Wake on LAN® None					ne gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®					e gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®					igabit ethernet port, Realtek RTL8111GN, Wake on LAN®					e gigabit ethernet port, Realtek RTL8111GN, Wake on LAN®						 Lenovo Message Cente Adobe® Reader® 		
Manageability Security chip	None Trusted Platform	Module,	TCG 1.2-complia	nt			Environment	ENERGY STAR® 6.0*, EP GREENGUARD®; RoHS-c	EAT™ Gold rating* (*not for non-OS compliant; Cisco EnergyWise compa	S models); atible; ErP Lot 3																				
Security features	Kensington® M • Padlock loop • Smart USB pro	licroSaver otection, a ocks all st	[®] cable)	Hard disBoot seBoot witIndividu	strator password sk password quence control thout keyboard a al USB port disa s intrusion switch	and mouse ablement	Accessories	For compatible accessorie	es, please go to TC-AQP sheet																					
Can facturates for a										amaria Nariamahan C																				













ThinkCentre M600 Tiny Thin Client Platform Specifications

Processor	Intel® Celeron® Processor N3000 Series or Intel Pentium® Processor N3000 Series	Keyboard	Some: PS/2 Keyboard (PS/2 connector), Lenovo logo (for 2L models)				
	Processor Cores / Threads Frequency (Base/Max) Cache Memory Types Integrated Graphics Celeron N3000 2 / 2 1.04 / 2.08 GHz 2MB DDR3L-1600 Intel HD Celeron N3010 2 / 2 1.04 / 2.24 GHz 2MB DDR3L-1600 Intel HD 400	Mouse	Some: Preferred Pro USB Keyboard (USB connector), Lenovo logo Some: Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black Some: PS/2 Optical Wheel Mouse, black, Lenovo logo (for 2L models) Some: Enhanced Optical USB Mouse, black, Lenovo logo Some: Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black				
Chipset	Intel Architecture (IA) SoC that integrates Intel processor core, graphics, memory controller, and I/O interfaces into a single system-on-chip solution	Mechanical	• Tiny (1L or 2L), black color, metal case				
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 11.1,		Dimensions (WxDxH) Max weight (lb / kg)				
	twoDisplayPort™, one optional 3rd DP (not support DP to HDMI dongle) or VGA, supports triple independent display;		M600 Tiny only (1L) 7.05" X 7.20" X 1.36" 2.9 lb (1.3 kg) 179mm X 182.9mm X 34.5mm				
	Maximum resolution: 3840x2160(DP)@30Hz; 1920x1200(optional VGA)@60Hz; 1920x1080(DP to VGA dongle)@60Hz; 1920x1080(DP to DVI dongle)@60Hz; 3840x2160(DP to HDMI dongle)@30Hz	M600 Tiny only (2L) 7.05" X 7.20" X 3.15" 4.2 lt 179mm X 182.9mm X 80mm					
Monitor cable	Optional DP to VGA, DP to DVI-D (single link), or DP to HDMI 1.4 dongle	VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm				
Memory	and that 7 DD 10 Low Voltage, DD 10L 1000, Holl parity, one 204 pin 00 Divini	Floor Stand	Optional system floor stand for vertical orientation				
Storage	16GB 32GB or 128GB M 2 Solid State Drive (SSD) SATA interface	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)				
Optical Onboard SATA Media reader	None SATA 6.0Gb/s controller, one connectors on planar None	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service, OID (Onsite International Delivery) / service upgrades available				
Front ports*	Two USB 3.0 (one is Always On and fast charge), one microphone (stereo, 3.5mm),		For Lenovo service upgrade options, please go to S-TC sheet				
Rear ports*	one headphone / microphone combo jack (stereo, 3.5mm) Two USB 2.0, two USB 3.0, ethernet (RJ-45), two DisplayPort, one optional port (VGA, 3rd DP, or serial on some models), one headphone; additional four serial (9-pin), one parallel (25-pin), and two PS/2 ports on 2L models *Depending on many factors, actual data transfer speed may be lower than theoretical speed None	Preload	Some: Windows Embedded Standard 7 (WES 7) Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS (Lenovo Terminal Operating System, Linux-based) Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)				
Audio support		Environment	ENERGY STAR® 6.0*, EPEAT™ Gold rating* (*not for non-OS models);				
WLAN ¹³	Some: 11ac wireless, M.2 Card, Realtek RTL8821AE (dual band), Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 (only for 1L models)	Accessories	GREENGUARD®; RoHS-compliant; Cisco ĒnergyWise compatible; ErP Lot 3 For compatible accessories, please go to TC-AQP sheet				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter One gigabit ethernet port, Realtek RTL8111GN, Wake on LAN® None						
Manageability Security chip	None Trusted Platform Module, TCG 1.2-compliant						
Security features	 Security slot (in rear for optional Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Power-on password Administrator password Boot sequence control Boot without keyboard and mouse Individual USB port disablement Chassis intrusion switch 		Lanava Navambar 2017				

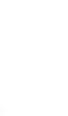
























ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo
	ADII		Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), black color; metal case • Toolless chassis open (for models with optional toolless chassis screw)
	A9-9420e	2	1.8 / 2.7 GHz	1 MB	DDR4-1866	Radeon R5 Series		Toolless HDD, SSD, memory, Wi-Fi removal
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower cap	pability of memory		Optional dust filter M625 Tiny only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H
Disk	Some: SATA 6.0 Some: 128GB N Some: 256GB N	1.2 Solid	State Drive (SS	D) / PC	le NVMe interl	ace	VESA mount Floor Stand	2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation
Optical Onboard SATA	None one SATA 6.0Gb	/s conne	ctor on planar				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
Media reader	None		•				Limited warranty ³	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available
Graphics	Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; e-C)@6) Type-C with [280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit listed) Some: Windows 7 Professional 64 preinstalled through downgrade Preloaded applications (only some listed) - Windows 10 only - Lenovo Vantage
Monitor cable	Optional DP to V		to DVI-D (single	link), or	DP to HDMI 1	.4 dongle		rights in Windows 10 Pro 64-bit • LinkedIn • Microsoft Office preloaded;
Chipset	AMD SoC platfo							purchase a product key to activate
Front ports*	Two USB 3.1 Ge one headphone	n1 (one	is Always On ar	nd fast cl	narge), one mi	crophone (3.5mm),		- Windows 7 only ■ Lenovo Solution Center
Rear ports*	One USB 3.1 Ge two optional port Alternate Mode), * Depending on ma	en1, three s (Port 1 Port 2 fo	e USB 2.0, ethe for VGA / serial or serial)	rnet (RJ I / USB 2	-45), two Disp 2.0 Type-C (wit	layPort, th DisplayPort than theoretical speed		 Lenovo System Update Factory Recovery User Guide Viewer Microsoft Office preloaded;
I/O box	None	15) 4 1	D !! ! A! O!	200 1/00				purchase a product key to activate • Adobe® Reader®
Audio support						speaker (1.5 watt)		
WLAN ¹³	Some: 11ac wire Wi-Fi + E	Bluetooth	4.2* combo ad	apter. 2x	(2	,,	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO
Bluetooth™	Some: Bluetooth	Bluetooth	4.2* combo ad reless, integrate	apter, 2x	t2 Fi + BT combo	adapter	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)
Ethernet Modem	* Win 10 RS3 an Gigabit ethernet, None	d Win10 Realtek	earlier version (RTL8111HN, V	only sup Vake on	port Bluetooth LAN®	4.1	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Manageability Security chip Security features	None Discrete TPM 2.0 Security slot (ir Kensington® M Smart USB pro mouse only, blo Power-on pass	rear for icroSave otection, ocks all s	optional r® cable) allows keyboard	 Har Boo Boo Indi 		ord ontrol oard and mouse ort disablement		























ThinkCentre M625 Tiny Thin Client Platform Specifications

Processor	AMD E2 series A	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo		
	APU	Coros	Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo		
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), fan-less design, black color, metal case Toolless chassis open (for models with optional toolless chassis screw)		
	E2-9000e	2	1.5 / 2.0 GHz	1 MB	DDR4-1866	Radeon R2 Series		Toolless SSD, memory, Wi-Fi removal		
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower cap	pability of memory		M625 Tiny Thin Client only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration		
Disk	Some: 32GB M. Some: 128GB M					face	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation		
Optical Onboard SATA Media reader	None one SATA 6.0Gb/ None	/s conne	ctor on planar				Power supply Limited warranty ³	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models) y ³ Some: 1-year, depot service / service upgrades available		
Graphics	AMD Radeon™ (Graphic	s in processor.	uses ma	in memory. Di	rectX® 12, two		Some: 1-year, limited onsite service / service upgrades available		
·	DisplayPort™, on Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; pe-C)@6	Type-C with [280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)		
Monitor cable Chipset	Optional DP to V		to DVI-D (single	link), or	DP to HDMI	1.4 dongle	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO		
Front ports*	Two USB 3.1 Ge	n1 (one i				crophone (3.5mm),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock		
Rear ports*	one headphone / One USB 3.1 Ge two optional ports	n1, three	e USB 2.0, ethe	rnet (RJ	-45), two Disp	layPort, th DisplayPort	Accessories	Fungus, Solar Radiation) For compatible accessories, please go to http://smartfind.lenovo.com		
	Alternate Mode),	Port 2 fo	or serial)		, ,	han theoretical speed	Accessories	To compatible decedednes, please go to mip.//smartima.ic/io/o.som		
I/O box	None									
Audio support			·			speaker (1.5 watt)				
WLAN ¹³	Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E	Bluetooth eless, M. Bluetooth eless, M. Bluetooth eless, M. Bluetooth	4.2* combo ad 2 Card, Qualco 4.2* combo ad 2 Card, Realtel 4.2* combo ad 2 Card, Qualco 4.2* combo ad	apter, 13 mm Athe apter, 13 c RTL882 apter, 23 mm Athe apter, 23	x1 eros QCA9377 x1 22BE (dual ba x2 eros QCA6174 x2	7 (dual band), nd), 4A (dual band),				
Bluetooth™	Some: Bluetooth * Win 10 RS3 and									
Ethernet Modem	Gigabit ethernet, None									
Manageability Security chip	None Discrete TPM 2.0	,								
Security features	Security slot (ir Kensington® M Smart USB pro mouse only, blo Power-on pass	icroSave otection, ocks all s	r® [·] cable) allows keyboar	 Har Boo Boo Indi 	ninistrator pas d disk passwo ot sequence co ot without keyb vidual USB po assis intrusion	ord ontrol ooard and mouse ort disablement				

















ThinkCentre M630e Tiny Platform Specifications

Processor	Intel® Pentium®, or 8th	Generat	ion Intel Core™	i3 / i5 Pr	ocessor		Manageability	None			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support	Integrated	Security chip	Firmware TPM 2.0,	integrated in chipse		
	Pentium Gold 5405U	2 / 4	2.3G	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security leatures	 Security slot (in re Kensington® Micro 	ear for optional oSaver® cable)	Boot sequence Boot without key	control board and mouse
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		Chassis intrusion	switch	 Individual USB 	port disablement
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Power-on passwo 			ection, allows keyboard/
Memory	16GB max, DDR4-266						_	Administrator pasHard disk passwo		mouse only, blo	cks all storage devices
Wichiory	* System automaticall	y clocks	down for the prod	cessors	with lower memo	ry controller	Keyboard	board Some: Lenovo Calliope Keyboard (USB connector), black			
Storage	Some: Hard Drive / S	ATA 6.00	ab/s, 2.5", 5400 r	rpm or 7			Mouse				
	Some: Solid State Dr Some: M.2 SSD (228				PGh/s		Mechanical	Tiny (1L), black color; metal case			
	Some: M.2 SSD (224							Optional dust filte Ope 2.5" hav for l		clote (one for WI AI	N, one for M.2 SSD)
Onboard SATA	One onboard SATA 6.							Office 2.5 bay for i	·	·	· ,
Graphics	Intel HD Graphics 61					12, one			+	ns (WxDxH)	Weight (Approx.)
	DisplayPort™, one HD							Tiny only		20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config
Monitor cable	Max resolution: 4096x Optional DP to VGA d	onale or	DP to HDMI 1.4	.2304 (n donale	DIVII) @ 24 HZ			0 11 11/504			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Chipset	Intel SoC (System or	n Chip) p	latform				VESA mount Floor Stand	Optional VESA mou Optional system flo			and 100mm
Front ports* (Std.)	One USB 3.1 Gen1, o				nicrophone (3.5m	ım),	Power supply	Some: 65 watts adapter, autosensing, 88% PSU			
Rear ports* (Std.) Rear ports* (Opt.)	one headphone / micr Two USB 3.1 Gen1, to None	vo USB 2	ombo jack (3.5n .0, one ethernet	nm) (RJ-45)	, one DisplayPor	t, one HDMI	Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available			
	* Depending on many fac	ctors, actua	ıl data transfer spe	ed may b	e lower than theore	etical speed	Preload	Preloaded operati			
Audio support	Realtek ALC233VB / i	nternal s	peaker (1.5 watt))				Some: Windows® Some: Windows 1	10 Pro 64-bit		
WLAN	Some: 11ac wireless,				dual band),			Preloaded applica		isted)	
	Wi-Fi + Blueto Some: 11ac wireless		ombo adapter, 1		(dual band)			 Lenovo Vantage 	` •	,	
			ombo adapter, 2		duai bariu),			Microsoft Office p			
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirele	ess-AC 3165,			purchase a produLinkedIn	ict key to activate		
	Some: 11ac wireless		ombo adapter, 1 d. Intel Dual Bar		ess-AC 8265		Environment	ENERGY STAR® 7.	0. EPEAT™ Silver r	ating, ErP Lot 3, TO	CO, RoHS-compliant,
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2	,			WEEE, REACH	-,	J,	
Bluetooth	Some: Bluetooth 4.2			-Fi + BT	combo adapter		MIL-SPEC test	Coming soon			
Ethernet Ethernet (Opt.)	Gigabit ethernet, Real None	itek HTL	TITHN-CG				Accessories	For compatible acce	essories, please go	to http://smartfind	d.lenovo.com
							1				

Note: The specifications above may not be available in all regions.













ThinkCentre M710 Tiny Platform Specifications

Processor	Intel® Celeron®. Int	el Pentiur	n®. or 6/7th Gene	eration In	itel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in real	ar for optional • Administrate	or password	
	Processor	Cores /	Frequency Base/Max(GHz)		Memory Support (Up to)		Joseph Harris	Kensington® Micro		assword	
	Pentium G4400T	2/2	2.9G	3 MB	DDR4-2133	HD 510		mouse only, blocks	all storage devices Boot without	t keyboard and mouse	
	Pentium G4560T	2/4	2.9G	3 MB	DDR4-2400	HD 610		 Power-on passwor 	d ● Individual U ● Chassis intr	SB port disablement	
	Pentium G4600T	2/4	3.0G	3 MB	DDR4-2400	HD 630	Kaybaard	Comor Longua Calli			
	Core i3-6100T	2/4	3.2G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calli	ope Keyboard (USB connector), blac tional Keyboard (USB connector), bla	K ack	
	Core i5-6500T	4/4	2.5G / 3.1G	6 MB	DDR4-2133	HD 530		Some: Lenovo Callid	ope Wireless Keyboard (2.4GHz via	USB receiver), black	
	Core i7-6700T	4/8	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Callid	ope Mouse (USB connector), black	<i>,</i> .	
	Core i3-7100T	2/4	3.4G	3 MB	DDR4-2400	HD 630		Some: Lenovo Callid	ope Wireless Mouse (2.4GHz via US	B receiver), black	
	Core i5-7400T	4/4	2.4G / 3.0G	6 MB	DDR4-2400	HD 630	Mechanical	Tiny (1L), black color			
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2400	HD 630		Toolless chassis on			
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630		 Toolless HDD, SSE Optional toolless c 			
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630		 Optional dust filter 	nassis screw		
Memory	32GB max, DDR4- dual-channel capa		o 260-pin SO-DI	MM sock	ets, non-ECC,			M740 Time and	Dimensions (WxDxH)	Weight (Approx.)	
Ctorogo	* System automatic	cally clock				ory controller		M710 Tiny only	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.91 lb (1.32 kg), vary by config	
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Drive (S	SD) / SATA 6.0Gb	o/s, 2.5"		le.		With VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config	
Optical	Some: Intel Optan Some: DVD-ROM	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		With VESA mount & I/O box	7.42" X 7.30" X 2.62" 188.4mm X 185.38mm X 66.6mm	3.66 lb (1.66 kg), vary by config	
•	Some: DVD Burne	er (DVϱF	RW), slim (9.0mm			box	VESA mount		nt bracket kit, supports VESA 75mm		
Onboard SATA Media reader	One onboard SATA None	4 6.0GD/S	connector				Floor Stand	Optional system floor stand for vertical orientation 65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)			
Graphics	Intel HD Graphics two DisplayPort™, with DisplayPort Al	one optio	nal video port (H	DMI, VG.	A, 3rd DP, or UŚĒ		Power supply	90 watts AC/DC ada	oter, autosensing, 88% PSU (only for	r models with I/O box)	
	Max resolution: 40	96x2304 (6x2304 ((Type-C)@60Hz;			Some: 1-year or 3-	year, depot service / service upgrad year, limited onsite service / servic		
Monitor cable	Optional DP to VG	A, DP to [HDMI 1.4	Preload	Some: Windows® 7 preinstalled	Professional 32/64 through downgrade		
Chipset	Intel B250 Chipse	et						rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel			
Front ports*	Two USB 3.1 Gen1	I (one is A	Ilways On and fa	st charge	e), one microphor	ne (3.5mm),		(not available processor)	e with 7th Gen Intel		
Rear ports*	one headphone / n Four USB 3.1 Gen or two specific USB	1 (optiona	ıl external optical	box or e				Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	two optional ports (with DisplayPort A	(Port 1 for Iternate N	VGA / 3rd DP / I lode), Port 2 for	HĎMI / s serial)	erial / USB 3.1 Ty	pe-C Gen 1		Preloaded applicati listed) • Microsoft Office pr	, ,		
I/O box*	Optional external la on rear, two USB 2 Tiny)							purchase a production of the p	t key to activate		
	* Depending on many	/ factors. ac	tual data transfer s	peed may	be lower than theo	retical speed		 Lenovo Companio 			
Audio support	High Definition (HD			· ·				- Only for Window 7	ontor		
WLAN ¹³	Some: 11ac wirele	, .			•	,	1	Lenovo Solution CLenovo ThinkVanta			
VVLAIN		etooth 4.	1 combo adapter	, 1x1	`	,,		Create Recovery N Adobe® Reader®			
		etooth 4.	1 combo adapter	, 2x2	,	banuj,		Cyberlink PowerD\ (DVD±RW)	/D Create		
	Wi-Fi + Blu	etooth 4.	1 combo adapter	, 1x1			Environment	ENERGY STAR® 6.1	, EPEAT™ Gold rating (North Americ	ca),	
		etooth 4.	1 combo adapter	, 2x2				ErP Lot 3, GREENG TUV low noise verifie	UARD®, RoHS-compliant,	•	
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None						MIL-SPEC test	MIL-STD-810G milita	ary certification (Low Pressure [Altitum mperature Shock, Humidity, Sand ar		
Manageability Security chip	None TPM (Trusted Platf * Downgrade to TP	orm Modu M1.2 for t	ule) 2.0*, TCG Ce he models with V	ertified Vin10 D0	G Win7 32 OS		Accessories		esories, please go to http://www.len	ovoquickpick.com	

See footnotes for more detailed information













ThinkCentre M715 Tiny (2nd Gen) Platform Specifications

Processor	AMD Athlon, A6, A1	0, A12,	or Ryzen pro	cessor			Security features	Security slot (in rear for optional		
	Processor Athlon 200GE	Cores / Threads	Frequency Base/Max 3.2 GHz	L2 / L3 Cache	Memory Support (Up to) DDR4-2666	Integrated Graphics		 Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/mouse only, blocks all storage devices Hard disk password Boot sequence control Boot without keyboard and mouse individual USB port disablement 		
	Athlon PRO 200GE	2/4	3.2 GHz 3.2 GHz	1 MB / 4MB	DDR4-2666 DDR4-2666	Radeon Vega 3 Radeon Vega 3		Power-on password Power-on password Chassis intrusion switch	ı	
	PRO A6-8570E	2/4	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	.,	Some: Lenovo Traditional Keyboard (USB connector), black		
	PRO A6-9500E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black	Ĺ	
	PRO A10-9700E	4/4	3.0 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	Iviouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support,	black	
	PRO A12-9800E	4/4	3.1 / 3.8 GHz	2 MB / -	DDR4-2400	Radeon R7		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black	Diaoi	
	Ryzen 3 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8	Mechanical	Tiny (1L), black color; metal case		
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		• Toolless chassis open (need optional toolless chassis screw)		
	Ryzen 5 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11		Optional dust filter		
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11		M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H		
Memory	32GB max, DDR4 2 * System automatica	ally cĺocl	ks down for th	ne lower me	mory contro			7.05 W X 7.20 D X 1.36 H 179mm W X 182.9mm D X 34.5mm H 2.91 lb (1.32 kg), weight may vary by configuration With VESA mount & ODD box:		
Disk Optical	Some: Hard Drive / Some: Solid State Some: M.2 SSD / F * 128GB SSD M.2 (; Some: DVD-ROM,	Drive (S PCIe NV 2242) P 9.0mm l	SD) / SATA 6 Me, PCIe 3.0 CIe NVMe or nigh. via USB	.0Gb/s, 2.5 x 4*, 32Gb nly supports s external O	/s PCIe 3.0 x DD box	2, 16Gb/s	VESA mount Floor Stand	7.42" W X 7.30" D X 2.48" H 188.4mm W X 185.38mm D X 63mm H 3.66 lb (1.66 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation		
'	Some: DVD±RW, 9	.0mm hi	igh, via USB	external OD	D box					
Onboard SATA	One SATA cable (1-		,,				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models	s)	
Graphics	AMD Radeon™ Gra						Limited warranty	1-year or 3-year, limited onsite service / service upgrades available		
Monitor cable	DisplayPort™, one of displays (supports in port or DP to DVI/HI Max resolution: 409 192 Optional DP to VGA	naximun DMI don 6x2160 0x1200	n of 2 concur gles, and Ath (DP)@60Hz; (VGA)@60Hz	rent HDMI/I nlon / Athlor 4096x2160 z	OVI displays PRO only s (HDMI)@3	when using HDMI support 2 displays); 0Hz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64-bit		
Chipset	AMD B300 Chipset	t						 Cyberlink PowerDVD (only for modern control of the co		
) Two USB 3.1 Gen1 3.5mm), one headpl) One USB 3.1 Gen1 one headphoneone	hone / m	nicrophone co	ombo jack (stereo, 3.5m	ım)		with DVD / DVD±RW) • Cyberlink Power2GO (only for mowith DVD±RW) • LinkedIn	odels	
) One optional port (V * Depending on many ** Not support VGA, 3r	factors, a d DP, HD	ctual data trans MI for the mod	sfer speed ma els with Athlo	y be lower th n / Athlon PR	an theoretical speed O		 Windows 7 only Lenovo Solution Center ThinkVantage System Update Create Recovery Media 		
Audio support	High Definition (HD)					, ,		Microsoft Office preloaded; purebase a product leavet a activate.		
WLAN		tooth 4.	2* combo ad	apter, 1x1	`	,,		purchase a product key to activate • Adobe® Reader®	e 	
	Some: 11ac wireles Wi-Fi + Blue Some: 11ac wireles	etooth 4.	2* combo ad	apter, 1x1		, ,,	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*Not for non-OS models); ErP Lot 3; ; RoHS-compliant		
	Wi-Fi + Blue	tooth 4.	2* combo ad	apter, 2x2	`	,,	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperatur Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Sh	re, hock)	
Bluetooth Ethernet	Wi-Fi + Blue Some: Bluetooth 4. * Hardware supports Gigabit ethernet, Re	wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), + Bluetooth 4.2* combo adapter, 2x2 ooth 4.2* wireless, integrated in Wi-Fi + BT combo adapter upports BT 4.2, but Win10 RS3 and earlier only supports BT 4.1 net, Realtek RTL8111EPV, Wake on LAN®				adapter	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, T	CG Cer	tified							













ThinkCentre M715 Tiny Thin Client Platform Specifications

Processor	AMD A6, A10, or	A12 ser	ies APUs				Keyboard		Fullsize USB Keyboard (USB connector), Lenovo logo			
	APU	Cores	Frequency	L2	Memory	Integrated	Mouse		me: USB Optical Wheel Mouse, black, Lenovo logo			
	PRO A6-8570E	2	Base/Max 3.0 / 3.4 GHz	Cache 1 MB	Types DDR4-2400	Graphics Radeon R5 Series	Mechanical	Tiny (1L) M715 Ti), black color; metal case			
	PRO A10-8770E	4	2.8 / 3.5 GHz	2 MB	DDR4-2400 DDR4-2400	Radeon R7 Series		7.05" W	X 7.20" D X 1.36" H			
	PRO A12-8870E*	4	2.9 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series	-	179mm \	W X 182.9mm D X 34.5mm H			
						via special bid models	VECA mount		.3 kg), weight may vary by configuration			
Memory	4GB max, DDR4					na opoolai bia modolo			I VESA mount bracket kit, supports VESA 75mm and 100mm I system floor stand for vertical orientation			
Disk	Some: 256GB Se		<u>'</u>				Power supply	65 watts	S AC/DC adapter, autosensing, 88% PSU (not included for TIO models)			
DISK	*256GB SATA (sup	port Wir	ndows 10 IOT ón	ly) is only	/ available via s	special bid models	Limited warranty ³		1-year or 3-year, depot service / service upgrades available			
	Some: 32GB M.2					· ,	Limitod Warranty		1-year or 3-year, limited onsite service / service upgrades available			
Optical	Some: 128GB M None	i.2 Solid	State Drive (SS	SD) / PC	ie NVMe interf	ace	Preload	Preload	led operating system			
Onboard SATA	One SATA cable ((1-drop t	o device), one	SATA 6.0	Gb/s connecte	or on planar			Windows Embedded Standard 7 V2 (WES 7 V2)			
Media reader	None							Some: \	Windows 10 IoT Enterprise LeTOS V2 (Lenovo Terminal Operating System, Linux-based)			
Graphics	AMD Radeon™ C						Environment		Y STAR® 6.1*, EPEAT™ Gold rating* (*not for non-OS models);			
						orts 3 independent s when using HDMI	Livioiiiicii		3; GREENGUARD®; RoHS-compliant			
	port or DP to DVI	/HDMI d	longles);			J	Accessories	For com	patible accessories, please go to http://www.lenovoquickpick.com			
	Max resolution: 4				160 (HDMI)@3	30Hz;						
DP cable	Optional DP to VC		00 (VGA)@60H: to DVI-D (single		DP to HDMI 1	1.4 dongle						
Chipset	AMD B300 Chips	set	, ,	,,								
Front ports*	Two USB 3.0 (one	e is Alwa	ays On and fast	charge)	, one micropho	one (stereo, 3.5mm),						
	one headphone /	microph	one combo jac	k (sterec	, 3.5mm)							
Rear ports*	one specific USB	e USB 3.0 and three USB 2.0 (optional external optical box or I/O box occupies expecific USB 2.0 on some models), ethernet (RJ-45), two DisplayPort,										
	one optional port	(VGA, 3	ord DP, HDMI, o	r serial c	n some mode	ls), one headphone						
I/O box		ny factors	, actual data trans	sfer speed	d may be lower th	han theoretical speed						
	None	ID\ Aal:	a. Daaltal: ALO	200.00	/:-t	lean (1 Fatt)						
Audio support	High Definition (H		*			,						
WLAN ¹³	Some: 11ac wire Wi-Fi + B		4.0 combo ada			na),						
Bluetooth™	Some: Bluetooth	oth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter				combo adapter						
Ethernet Modem	Gigabit ethernet,	Realtek	RTL8111EPV,	Wake or	ı LAN®							
Manageability	None DASH 1.0/1.1											
Security chip	Discrete TPM 2.0	TCG C	ertified									
Security features	Security slot (in	•		• Adr	ninistrator pas	sword						
	Kensington® Mi			Har	d disk passwo	ord						
	Padlock loop Smart USB pro-	tootion	allowe keybeer		ot sequence co							
	Power-on passy		.3		assis intrusion							
	 Smart USB pro- mouse only, blo 	cks all s		d/ ● Boo ● Indi	ot without keyb ividual USB po	oard and mouse ort disablement						













ThinkCentre M715 Tiny Thin Client (2nd Gen) Platform Specifications

Processor	AMD Athlon, A6, A10), or Rvz	en processor				Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	APU Athlon PRO 200GE	Cores / Threads	Frequency Base/Max 3.2 GHz	L2 / L3 Cache	Memory Sup- port (Up to) DDR4-2666	Integrated Graphics Radeon Vega 3	Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	Mechanical	Tiny (1L), black color; metal case
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		 Toolless chassis open (need optional toolless chassis screw) Optional dust filter
Memory	8GB max, DDR4 266 * System automatical							M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H
Disk Optical	Some: 32GB M.2 So Some: 128GB M.2 S None	olid State Solid Stat	e Drive (SSD) te Drive (SSD	/ SATA inte 0) / PCIe N\	erface VMe, PCIe 3	.0 x 2	VESA mount	179mm W X 182.9mm D X 34.5mm H 2.91 lb (1.32 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm
Onboard SATA	One SATA cable (1-d	rop to de	evice), one S	ATA 6.0Gb/s	s connector	on planar	Floor Stand	Optional system floor stand for vertical orientation
Graphics	AMD Radeon™ Grap		,.				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
·	DisplayPort™, one op	tional po	ort (HDMI, VC	A, or 3rd D	P), supports	s 3 independent	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available
	displays (supports manager or DP to DVI/HD Max resolution: 4096	MI dong x2160 (E	les, and Athlo DP)@60Hz; 4	on / Athlon I	PRO onlý su	pport 2 displays);	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise
Monitor cable	1920 Optional DP to VGA		/GA)@60Hz	longlo or D		I 4 donalo		Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Chipset	AMD B300 Chipset	uorigie, L		Jorigle, or D	P 10 HDIVII	r.4 dorigie	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant
, , ,	Two USB 3.1 Gen1 (c 3.5mm), one headph	one / mid	crophone cor	nbo jack (st	éreo, 3.5mm	n) .	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)
Rear ports* (Std.)	One USB 3.1 Gen1 a	and three	e USB 2.0, et	nernet (HJ-	45), two Dis	playPort,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Rear ports* (Opt.)	One optional port (VC * Depending on many fa ** Not support VGA, 3rd	ctors, act	ual data transfe	er speed may	be lower than	theoretical speed		3
Audio support	High Definition (HD)	Audio, R	ealtek ALC23	33-VB2 / int	ernal speak	er (1.5 watt)		
WLAN	Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: Bluetooth 4.2	cooth 4.2 s, M.2 Ca cooth 4.2 s, M.2 Ca cooth 4.2 s, M.2 Ca cooth 4.2 2* wireles	* combo ada ard, Qualcom * combo ada ard, Realtek I * combo ada ard, Qualcom * combo ada ss, integrated	oter, 1x1 Im Atheros oter, 1x1 RTL8822BE oter, 2x2 Im Atheros oter, 2x2 In Wi-Fi + I	QCA9377 (c E (dual band QCA6174A BT combo a	dual band),), (dual band), dapter		
Bluetooth Ethernet	* Hardware supports Gigabit ethernet, Rea					DORTS BT 4.1		
Manageability Security chip Security features	DASH 1.0/1.1 Discrete TPM 2.0, TC			- A almainte	lunkau mas	d		
Coounty locatores	 Security slot (in rea Kensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on password 	Saver® ca ion, allov all stora	able) ws keyboard/	Hard disBoot secBoot witIndividual	trator passw sk password quence cont hout keyboa al USB port intrusion sw	rol Ird and mouse disablement		













ThinkCentre M720 Tiny Platform Specifications

Processor Tomas Features County From the County County	Processor	Intel® Celeron®, Intel F	Pentium®.	or 8th / 9th Gen	Intel C	ore™ i3 / i5 / i7 / i	9 Processor	Manageability	None					
Security Pearlure Security				Frequency				Security chip	Discrete TPM 2.0, TCG Certified					
Pertium Gold GS507				` '		(Up to)		Security features	• Security slot (in rea					
Power on password Power password Power on password Power pas														
Administratory password Administratory p						-			 Power-on password Smart USB protection, allows keeping 					
Core 18-9800T						<u> </u>								
Core 15-84007				-										
Cone it-8600T 6 / 6 2.16 / 3.56 9.MB DBR-42666 UHD 530								Keyboard	Some: Lenovo Callio	pe Keyboard (U	SB connector), black	(
Concert 1-800 1-									Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver),					
Some Continue Co								Mouse						
Some: Lanovo Calliope Wireless Mouse (2.4-GHz via USB receiver), black Some: Lanovo Calliope Wireless Mouse (2.4-GHz via USB receiver), black Some: Lanovo Calliope Wireless Mouse (2.4-GHz via USB receiver), black Some: 1.4-GHz via USB						-		Wiodoc	Some: Lenovo Finge	rprint Mouse (USB	SB connector). Wind	lows Hello support, black		
Core iB-3800T 41/4 3_26_3_86 BMB DDR4-2800 UHD-630			-	 		<u> </u>								
**Toolles's classis open (need optional toolles's chassis screw) **Toolles's chassis open (need optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis open (need optional toolles's chassis optional toolles's chassis optional toolles's chassis options' not chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional toolles's chassis optional tool								Mechanical	Tiny (1L) black color:	metal case	,			
Core 15-9900T 6 / 6 2.36 / 376 9 MB DDR4-2666 UHD 630								Mooriariioar			al toolless chassis so	crew)		
Core is-9600T 6 / 6 2.36 / 3.93 9 MB DDR4-2666 UHD 630										, mèmory remova	al	,		
Core if 97000T 818 2.06/4.36 12 MB DDR4-2868 UHD 630										/CCD and DCIa	O O vO alat /law prof	ile) two M O clots (one		
Memory 32GB max, DDR4-2666*, two 260-jin SQ-DIMM sockets, non-ECC, dual-channel capable 1.0 miles 1.0 mile														
Memory SCBB max, DPR4-2666*, two 260-pin SO-DIMM sockets, non-ECC, dual-channel capable System-audical channel capable Syste				 		 			101 112/111, 0110 101 1111	, · ·				
dual-channel capable *System untomatically clocks down for the processors with lower memory controller *System untomatically clocks down for the processors with lower memory controller *System untomatically clocks down for the processors with lower memory controller *System untomatically clocks down for the processors with lower memory controller *Some: Active Company of th							OHD 630							
Storage Some: Hart Drive / SATA 6.0Gb/s, 2.5°, 5400 pm or 7200 pm	Memory		66*, two 2	260-pin SO-DIMI	√l socke	ets, non-ECC,			l iny only					
Some: Solid State Drive (SSD) / SATA 6.0Gb/s 2.5" Some: No. 258D P/Cle NVMe, PCle 3.0 x 4', 32Gb/s Some: NVMe, PCle 3.0 x 4', 32Gb/s Some: NVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: ODD Burner (DVD-ROM), slim (9.0mm), via USB external ODD box Some: Usb over 1500 and post size of the Volume of th							ory controller	r				3.66 lb (1.66 kg),		
Some: M.2 SSD / PCIe NVMé, PCIe 3.0 x 4*, 32Gb/s 128GB SSD M.2 (22442) PCIe NVMe only supports PCIe 3.0 x 2, 16Gb/s Some: Intel Optane™ Memory (not support Celeron / Pentium Processor), M.2 Some: DVD-ROM, slim (9.0mm), via USB external ODD box Onboard SATA One onboard SATA 6.06b/s connector One one one one one one one one one one o	Storage	Some: Hard Drive / S	SATA 6.00	6b/s, 2.5", 5400 i	pm or 7	7200 rpm			ODD box	188.4mm X 18	5.38mm X 63mm	vary by config		
Proor Stand Potential System floor stand for vertical orientation Some: Intel Qotane™ Memory (not support Deferon / Pentium Processor), M.2 Some: DVD-ROM, slim (9.0mm), via USB external ODD box Onboard SATA One onboard SATA One onboard SATA 6.0Gb/s connector Intel HD Graphics 610(9530 in processor, uses main memory, DirectX™ 12, one DisplayPort™, one HDMI, one optional video port (2nd HDMI, VGA, 2nd DP or USB 3.1 Type-C Gen time that the properties of the William one HDMI one optional video port (2nd HDMI, VGA, 2nd DP or USB 3.1 Type-C Gen time that the properties one HDMI one optional video port (2nd HDMI, VGA, 2nd DP or USB 3.1 Type-C Gen time that the properties of the properties of the product of the product of the properties of the properties of the product of the properties of the product of the properties of the product of t								VECA mount						
Optical Some: Intel Optanè "Mémory (not support Céleron / Pentium Processor), M.2 Some: DVD-ROM, slim (9.0mm), via USB external ODD box Some: DVD-Borner (DVD-EMW), slim (9.0mm), via USB external ODD box Some: DVD Burner (DVD-EMW), slim (9.0mm), via USB external ODD box Some: 30 watts AC/DC adapter, autosensing, 88% PSU Some: 136 watts AC/DC adapter, autosensing, 88% PSU Some: 136 watts AC/DC adapter, autosensing, 88% PSU Some: 136 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU Some: 136 watts AC/DC adapter, autosensing, 88% PSU Some: 146 watts AC/DC adapter, autosensing, 88% PSU Some: 146 watts AC/DC adapter, autosensing, 88% PSU Some: 146						Cle 3 0 x 2 16Gh	n/s							
Optical Some: DVD-RM, slim (9.0mm), via USB external ODD box Some: 90 watts AC/DC adapter; autosensing, 88%; PSU Onboard SATA 6.0Gb/s connector Onboard SATA 6.0Gb/s connector Intel HD Graphics 6 10f30 in processor, uses main memory, DirectX**12, one DisplayPort** one HDMI, one optional video port (2nd HDMI, VGA, 2nd DP or USB 3.1 Type-C Gent with DisplayPort function, up to 3 independent displays; Max resolution: 4096:x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (DP)@60Hz; 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2304 (DP)@60Hz; 4096x2		Some: Intel Optane™	¹ Memorv	(not support Ce	leron / I	Pentium Processo	or), M.2		Some: 65 watte AC/F					
Onboard SATA One onboard SATA 6.0Gb/s connector Intel HD Graphics 610/630 in processor, uses main memory, DirectX® 12, one DisplayPort™, one HDMI, one optional video port (2nd HDMI), VGA, 2nd DP, or USB 3.1 Type-C Gen1 with DisplayPort function), up to 3 independent displays; Max resolution: 4096x2304 (DP) e00Hz; 4096x2304 (Type-Q) 660Hz; 4096x204 (Type-Q) 60Hz; 4096x204 (Type-Q) 60Hz; 4096x204 (Type-Q) 60Hz; 40Hz; Optical	Some: DVD-ROM, sli	im (9.0mr	n), via USB exte	rnal OD	D box		l ower supply	Some: 90 watts AC/E	OC adapter, auto	sensing, 88% PSU				
Intel HD Graphics 610/630 in processor, uses main memory, DirectX® 12, one DisplayPort**, one HDMI, one optional video port (2nd HDMI, VGA, 2nd DP, or USB 3.1 Type-C Gen1 with DisplayPort function), up to 3 independent displays; Max resolution: 4096x2304 (DP)® 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (DP)® 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (Type-C)@ 60Hz; 4096x2304 (DP)® 60Hz; 4096x234 (DP)® 60Hz; 4096x234 (DP)® 60Hz; 4096x234 (DP)® 60Hz; 4096x234	Onboard SATA				via USI	3 external ODD b	OOX		Some: 135 watts AC/	DC adapter, aut	osensing, 88% PSU			
DisplayPort**, one HDMI, one óptional video port (2nd HDMÍ, VGA, 2nd DP, or USB 3.1 Type-C Genf with DisplayPort function), up to 3 independent displays; Max resolution: 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x					main m	emory DirectX®	12 one							
Monitor cable Monitor cable Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle (for Collage Display with intel integrated graphics), or DP to HDMI 1.4 dongle Chipset Intel B360 Chipset Front ports* (Std.) one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (BJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports (mutually exclusive with PCle card): Port 1 for VGA / 2nd DP / 2nd hDMI / Serial / USB 3.1 Type-C Gen 1 via PCle ard: 2x USB 3.1 Gen1, 1x ethernet (BJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports via PCle card: 2x USB 3.1 Gen1 (1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1 Depending on many factors, actual data transfer speed may be lower than theoretical speed Audio support Realtek ALC233VBZ / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL882DE (dual band), WI-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, WI-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, WI-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 3 Mill-STD-810G military certification (Low Pressure [Altitude], High Temperature, Englated in WI-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, WI-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 3 Mill-STD-810G military certification (Low Pressure [Altitude], High Temperature, Englated in WI-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 3 Mill-STD-810G military certification (Low Pressure [Altitude], High Temperature, Englated in WI-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 3 Mill-STD-810G military certification (Low Pressure [Altitude]), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 3 Mill-	агартноо	DisplayPort™, one HD	MI, one	optional video po	rt (2nd	HDMÍ, VGA, 2nd	DP,							
Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle (for Collage Display with intel integrated graphics), or DP to HDMI 1.4 dongle Chipset Intel B360 Chipset Front ports' (Std.) one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports' (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI Rear ports' (Opt.) Two optional ports (mutually exclusive with PCle card; Port 1 for VGA / 2nd DP / 2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1							t displays;	Preload						
Optional DP to VGA dongle, DP to Dungle, DP to dual DP dongle (for Collage Display with intel integrated graphics), or DP to HDMI 1.4 dongle Chipset Front ports* (Std.) one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI PCIe card): Port 1 for VGA / 2nd DP / 2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCIe card: 2x USB 3.1 Gen1 via PCIe x1, 4x serial (9-pin) via PCIe x1 Depending on many factors, actual data transfer speed may be lower than theoretical speed Audio support WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter (2x2 Std) and the propertion of the		Max resolution: 4096x	(2304 (DF	P)@60Hz; 4096x	2304 (T	ype-C)@60Hz;	@ FOLL=		Some: Windows 10					
Monitor cable Display with intel integrated graphics), or DP to HDMI 1.4 dongle									Preloaded applications (only some listed)					
Chipset Intel B360 Chipset	Monitor cable						(loi oollage							
Front ports* (Std.) one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports (mutually exclusive with PCle card): Port 1 for VGA / 2nd DP / 2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1 Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Some: Some: Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Bluetooth Some: Sluetooth 4.2 combo adapter, 2x2 Bluetooth Bluetooth Bluetooth Brutintase a productar with DP (Mack 3.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 mb or 4.2 m	Chipset		<u>, </u>	, ,,				1						
one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports (mutually exclusive with PCle card): Port 1 for VGA / 2nd DP / 2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle x1 via PCle x1, 4x serial (9-pin) via PCle x1 PCle x1 Popending on many factors, actual data transfer speed may be lower than theoretical speed Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN® Occurrence of the provision of the Company of the		· · · · · · · · · · · · · · · · · · ·	lwovo On	and fact charge	\ ono I	ISB 2.1 Tupo C.C	Con 1	-				D\\\\		
Rear ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports (mutually exclusive with PCle card): Port 1 for VGA / 2nd DP / 2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1 Depending on many factors, actual data transfer speed may be lower than theoretical speed PCle x1 Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter (3igabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®	From ports (Stu.											nvv)		
2nd HDMI / serial / USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1 * Depending on many factors, actual data transfer speed may be lower than theoretical speed **Audio support** **Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) **WLAN** **Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 **Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 **Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 **Bluetooth** **Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection 1219-V (Jacksonville), Wake on LAN®** **TUV ultra low noise verified (coming soon, on some models), RoHS-compliant TUV ultra low noise verified (coming soon, on some models), RoHS-compliant TUV ultra low noise verified (coming soon, on some models), RoHS-compliant TUV ultra low noise verified (coming soon, on some models), RoHS-compliant TUV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compliant TuV ultra low noise verified (coming soon, on some models), RoHS-compli		2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x ethern	et (RJ-4	45), 1x DisplayPo	rt, 1x HDMI							
Optional ports via PCle card: 2x USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; Optional ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1 Depending on many factors, actual data transfer speed may be lower than theoretical speed Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter (Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®	Rear ports* (Opt.) Two optional ports (mi	utually ex	clusive with PCI	e card):	Port 1 for VGA /	2nd DP /	Environment	ENERGY STAR® 7.0, EPEAT™ Gold rating (North America), ErP Lot 3, TCO.					
PCIe x1 * Depending on many factors, actual data transfer speed may be lower than theoretical speed Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter (Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®									TUV ultra low noise v	TUV ultra low noise verified (coming soon, on some mod		lels), RoHS-compliant		
Audio support Realtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Gigabit ethernet Gigabit ethernet Connection I219-V (Jacksonville), Wake on LAN®			ie caru. Z	x 03D 3.1 dell1	via i O	ie XI, 4X Seriai (3	-piii) via	MIL-SPEC test	MIL-STD-810G milita	ry certification (L	ow Pressure [Altitud	le], High Temperature,		
Audio support Healtek ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®			ctors, actua	al data transfer spe	ed may l	oe lower than theore	etical speed				k, Humidity, Sand an	d Dust, Vibration, Shock,		
WLAN Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®	Audio support	Realtek ALC233VB2 /	optional	internal speaker	(1.5 wa	att or 2 watt)		ļ						
Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®		Some: 11ac wireless.	M.2 Car	d. Realtek RTL8	821CE	(dual band).		Accessories	For compatible acces	sories, please go	o to http://smartfind	l.lenovo.com		
Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),												
Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®														
Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,												
Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®														
Bluetooth Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®														
Ethernet Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®	Bluetooth	Some: Bluetooth 4.2	DUIN 4.2 C wireless	integrated in Wi	x∠ .Fi + RT	combo adanter								
Ethernet (Opt.) Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4		Gigabit ethernet, Intel	Ethernet	Connection I21	9-V (Jac	cksonville), Wake	on LAN®							
	Ethernet (Opt.)	Some: Intel Ethernet S	Server Ad	lapter I350-T4, g	igabit e	thernet, 4x RJ-45	5, PCIe x4							













ThinkCentre M75q-1 Tiny Platform Specifications

Processor	AMD Athlon PRO o	r Rvzen	3 / 5 PRO se	ries proces	sor		Security features	Security slot (in rear for optional Hard disk password				
	Processor	Cores / Threads	Frequency	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics	,	 Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Boot sequence control Boot without keyboard and mouse Individual USB port disablement 				
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		Power-on password Chassis intrusion switch				
	Athlon PRO 300GE	2/4	3.4 GHz	1 MB / 4MB		Radeon Vega 3	l.,	Administrator password				
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz		DDR4-2933	Radeon Vega 8	Keyboard	Some: Lenovo Traditional Keyboard (USB connector), black				
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black				
	Ryzen 3 PRO 3200GE	4/4	3.3 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		Some: Lenovo Fingerprint Mouse (USB connector), Black				
	Ryzen 5 PRO 3400GE	4/8	3.3 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11		(only available via special bid models)				
Memory	32GB max, DDR4-2 * System automatic						Mechanical	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Tiny (1L), black color; metal case				
Disk	Some: Hard Drive / Some: M.2 SSD (2	SATA 6	5.0Gb/s, 2.5", 280) / PCIe N	5400 rpm o	or 7200 rpm 3.0 x2 or PC	Cle 3.0 x4		 Toolless chassis open (need optional toolless chassis screw) Toolless HDD, SSD, memory removal 				
Optical	Some: DVD-ROM, Some: DVD±RW, 9	9.0mm l 0.0mm h	high, via USE igh, via USB	3 external O external OE	DD box			Optional dust filter M75q Tiny only: 7.05" W X 7.20" D X 1.36" H				
Onboard SATA	One SATA 6.0Gb/s	connect	or on system	board				179mm W X 182.9mm D X 34.5mm H				
Graphics Monitor cable	AMD Radeon™ Graphics in processor, uses main memory, DirectX® 12, one DisplayPort™, one HDMI, one optional port (VGA, 2nd DP, or 2nd HDMI), supports 3 independent displays (supports maximum of 2 concurrent HDMI/DVI displays when using HDMI port or DP to DVI/HDMI dongles, and Athlon / Athlon PRO only support 2 displays); Max resolution: 4096x2160 (DP)@60Hz; 4096x2160 (HDMI)@30Hz; 1920x1200 (VGA)@60Hz						VESA mount Floor Stand	2.91 lb (1.32 kg), weight may vary by configuration With VESA mount & ODD box: 7.42" W X 7.30" D X 2.48" H 188.4mm W X 185.38mm D X 63mm H 3.66 lb (1.66 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
	Optional DP to VGA HDMI 1.4 dongle		, DF 10 DVI-L	dorigle, Dr	to dual DF	doligie, of DF to	Power supply	Some: 65 watts adapter, autosensing, 88% PSU (not included for TIO models) Some: 135 watts adapter, autosensing, 88% PSU (not included for TIO models)				
Chipset	AMD B300 Chipse						Limited warranty	1-year or 3-year, limited onsite service / service upgrades available				
Front ports* (Std.) one USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) Rear ports* (Std.) 1x USB 3.1 Gen1, 3x USB 2.0, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI Rear ports* (Opt.) Two optional ports: Port 1 for VGA / 2nd DP / 2nd HDMI / serial; Port 2 for serial; * Depending on many factors, actual data transfer speed may be lower than theoretical speed							Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise Some: Linux Ubuntu				
Audio support WLAN	High Definition (HD) Some: 11ac wireles	s, M.2 (Card, Realtel	RTL8822C		,	Environment	ENERGY STAR® 7.1*, EPEAT™ Silver rating* (*Not for non-OS models); ErP Lot 3: RoHS-compliant: TUV low noise verified				
	Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9260 (dual band),					A (dual band),	MIL-SPEC test	MIL-STD-810H military certification (Low Pressure [Altitude], High Temperature Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shrungus, Solar Radiation)				
Bluetooth Ethernet	Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: Bluetooth 4.2 / 5.0 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111EPV-CG, Wake on LAN®					nbo adapter	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, T	CG Cer	tified									
Note: The considerations above you not be quickled in all various												













ThinkCentre M910 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pentium®, or 6/7th Generation Intel Core™ i3 / i5 / i7 Processor	Security features	Security slot (in rear for optional Kensington® MicroSaver® cable) Administrator password Hard disk password					
	Processor Cores / Frequency Cache Memory Support Integrated Graphics		Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Boot without keyboard and mouse					
	Core i5-6500T 4 / 4 2.5G / 3.1G 6 MB DDR4-2133 HD 530		Power-on password Power-on password Individual USB port disablement					
	Core i7-6700T 4 / 8 2.8G / 3.6G 8 MB DDR4-2133 HD 530		 Chassis intrusion switch 					
	Core i5-7500T 4 / 4 2.7G / 3.3G 6 MB DDR4-2400 HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black					
	Core i5-7600T 4 / 4 2.8G / 3.7G 6 MB DDR4-2400 HD 630		Some: Lenovo Traditional Keyboard (USB connector), black					
	Core i7-7700T 4 / 8 2.9G / 3.8G 8 MB DDR4-2400 HD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black					
Memory	32GB max, DDR4-2400*, two 260-pin SO-DIMM sockets, non-ECC, dual-channel capable * System automatically clocks down for the processors with lower memory controller	Mechanical	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Tiny (1L), black color; metal case					
Storage	Some: Hard Drive / SATA 6.0Gb/s, 2.5", 5400 rpm or 7200 rpm, APS Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Some: M.2 Solid State Drive (SSD) / PCle NVMe, PCle 3.0 x 4, 32Gb/s Some: Intel Optane™ Memory (models with 7th gen Core processor), M.2		 Toolless chassis open Toolless HDD, SSD, memory removal Optional toolless chassis screw Optional dust filter 					
Optical	Some: DVD-ROM, slim (9.0mm), via USB external ODD box		Dimensions (WxDxH) Weight (Approx.)					
Onboard SATA Media reader	Some: DVD Burner (DVD±RW), slim (9.0mm), via USB external ODD box One onboard SATA 6.0Gb/s connector None		M910 Tiny only 7.05" X 7.20" X 1.36" 2.91 lb (1.32 kg), 179mm X 182.9mm X 34.5mm vary by config					
Graphics	Intel HD Graphics 510/530/610/630 in processor, uses main memory, DirectX [®] 12, two DisplayPort™, one optional video port (HDMI, VGA, 3rd DP, or USB 3.1 Type-C		With VESA mount & 7.42" X 7.30" X 2.48" 3.66 lb (1.66 kg), ODD box 188.4mm X 185.38mm X 63mm vary by config					
	with DisplayPort Alternate Mode), up to 3 independent displays; Max resolution: 4096x2304 (DP) @ 60Hz; 4096x2304 (Type-C) @ 60Hz;		With VESA mount & 7.42" X 7.30" X 2.62" 3.66 lb (1.66 kg), I/O box 188.4mm X 185.38mm X 66.6mm vary by config					
Monitor cable	4096x2160 (HDMI)@24Hz; 1920x1200 (VGA)@60Hz Optional DP to VGA, DP to DVI-D (single link), DP to dual DP, or DP to HDMI 1.4	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation					
Chipset	Intel Q270 Chipset	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)					
Front ports*	Two USB 3.1 Gen1 (one is Always On and fast charge), one microphone (3.5mm),		90 watts AC/DC adapter, autosensing, 88% PSU (only for models with I/O box)					
Rear ports*	one headphone / microphone combo jack (3.5mm) Four USB 3.1 Gen1 (optional external optical box or external I/O box occupies one or two specific USB 3.1 Gen1 on some models), ethernet (RJ-45), two DisplayPort,	Limited warranty³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available						
I/O box*	two optional ports (Port 1 for VGA / 3rd DP / HĎMI / serial / USB 3.1 Type-C Gen 1 (with DisplayPort Alternate Mode), Port 2 for serial) Optional external I/O box, extends two USB 2.0, two USB 3.1 Gen1, and one serial on rear, two USB 2.0 on front, via USB cable (occupy two specific USB 3.1 Gen1 of Tiny) * Depending on many factors, actual data transfer speed may be lower than theoretical speed	Preload	Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processor) Some: Windows 10 Pro 64-bit — Only for Window 10 — Lenovo Companion					
Audio support	High Definition (HD) Audio, Realtek ALC294 / optional internal speaker (1w or 2w)		Some: Windows 10 Home 64-bit Intel Unite download link					
WLAN ¹³	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,		(vPro models only) - Only for Window 7 ■ Lenovo Solution Center ■ Lenovo ThinkVantage Tools ■ Create Recovery Media ■ Adobe® Reader® ■ Cyberlink PowerDVD Create (DVD±RW) ■ Intel Unite (vPro models only)					
	Wi-Fi + Bluetooth 4.2 combo adapter, Intel vPro technology support, 2x2	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),					
Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter * Hardware supports BT 4.2, but Win10 RS3 and earlier only supports BT 4.1		ErP Lot 3, GREENGUARD®, RoHS-compliant, TUV low noise verified (on some models)					
Ethernet Manageability	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Intel Active Management Technology 11.0 (Intel AMT 11.0);	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)					
Security chip	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection) TPM (Trusted Platform Module) 2.0*, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS	Accessories	Fungus, Solar Radiation) For compatible accessories, please go to http://www.lenovoquickpick.com					

See footnotes for more detailed information (M910 Tiny-Spec) February 2017





















ThinkCentre M920 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®	or 8th / 9th Gen	Intel Co	ore™ i3 / i5 / i7 / i	9 Processor	Bluetooth	Some: Bluetooth 4.2	2/5 0 wireless inte	grated in Wi-Fi + B	combo adapter	
1 10000001		Cores /	Frequency	Cache Memory Support Integrated Graphics		Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®					
	Processor	Threads	Base/Max(GHz)		(Up to)	Graphics	Ethernet (Opt.)				rnet, 4x RJ-45, PCIe x4	
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Manageability	Intel Active Manager	ment Technology 1	2 (Intel AMT 12);	VDra august Mi Fi	
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610		adapter to enable vP	Intel vPro technology on some models (require choosing a vPro-s adapter to enable vPro function through wireless connection)			
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610	Security chip	Discrete TPM 2.0, TCG Certified Security slot (in rear for optional Boot sequence con		511)		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	Security features			control		
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) Chassis intrusion switch Power-on password Administrator password Boot without keyboard and months individual USB port disablem Smart USB protection, allow mouse only, blocks all storage				
	Pentium Gold G5420T	2/4	3.2G 3.1G	4 MB 6 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 630						
	Core i3-8100T Core i3-8300T	4/4	3.1G 3.2G	8 MB	DDR4-2400 DDR4-2400	UHD 630						
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		 Hard disk passwor 			one an otorage aeriese	
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Callie	ope Keyboard (US	B connector), black		
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradi	itional Keyboard (l	JSB connector), bla	ck	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callie	ope Wireless Keyl	oard (2.4GHz via U	ISB receiver), black	
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	iviouse	Some: Lenovo Callie	ope Mouse (USB) ernrint Mouse (USB)	connector), black SB connector). Wind	ows Hello support, black	
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calli	ope Wireless Mou	se (2.4GHz via USE	3 receiver), black	
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color	-	,	,,	
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630	IVICCITATIICAI	• Toolless chassis or		l toolless chassis so	crew)	
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		 Toolless HDD, SSE 	D, mèmory remova		,	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		Optional dust filter DE how for LIDE		O vO alat /law profi	lot (low-profile), two M.2 slots (one	
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630					d are mutually exclusive	
Memory	32GB max, DDR4-266	36* two 2	260-nin SO-DIMI	/ socket	e dual-channal	canable						
	* System automaticall	y clocks o	down for the pro	cessors	with lower memo			Tiny only		ns (WxDxH) 20" X 1.36"	Weight (Approx.) 2.91 lb (1.32 kg),	
Storage	Some: Hard Drive / S				200 rpm				179mm X 182.	9mm X 34.5mm	vary by config	
	Some: Solid State Dr Some: M.2 SSD / PC							With VESA mount &		30" X 2.48"	3.66 lb (1.66 kg),	
	* 128GB SSD M.2 (22	242) PCIe	NVMe only sup	ports PC	Cle 3.0 x 2, 16Gb	o/s		ODD box	188.4mm X 185.38mm X 63mm vary by config			
Optical	Some: Intel Optane™ Some: DVD-ROM, sli Some: DVD Burner (I	m (9.0mr	n), via USB exte	rnal ODI	D box		VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector	via USD	external ODD t	JOX	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU				
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	0/630 in	processor, uses	main me	emory, DirectX®	12, one	1					
	or USB 3.1 Type-C Ge	en1 with [DisplayPort funct	ion), up	to 3 independen	t displays:	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available		es available		
	Max resolution: 4096x	2304 (DF	P)@60Hz; 4096x	2304 (Ty	/pe-C)@60Hz;		Limited Warranty	Some: 1-year or 3-year, depot service / service upgrades available				
Monitor cable	4096x Optional DP to VGA d		board HDMI)@2 to DVI-D donal				Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit				
	Display with intel integ					(ioi ooilago						
Chipset	Intel Q370 Chipset						1	Preloaded applicati		isted)		
Front ports (Std.)	*one USB 3.1 Gen1 (A	lways On	and fast charge), one U	SB 3.1 Type-C G	en 1,	1	 Lenovo Vantage 				
. , ,	one microphone (3.5n	nm), one	headphone / mid	rophone	e combo jack (3.	5mm)		Microsoft Office pr				
	* 2x USB 3.1 Gen2, 2x							purchase a productCyberlink PowerD\		Is with DVD / DVD+	RW)	
Rear ports (Opt.)	* Two optional ports (m 2nd HDMI / serial / US	utually ex	Clusive with PCI	e card): DP func	PORT I for VGA /	2nd DP /		Cyberlink Power20	GO (only for mode	Is with DVD±RW)	,	
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PCI	e x1. 4x serial (9	-pin) via		• LinkedIn		, , , , ,		
	PCle x1, 1x Thunderb	olt 3 (con	nbo USB3.1 Typ	e-C Gen	2 / DisplayPort)	via PCIe x4		Intel Unite (Machine Type 10V8 models only)				
	* Depending on many fac					etical speed	Environment	ENERGY STAR® 7.0				
Audio support	Realtek ALC233VB2			`			NAIL ODEO L	TUV ultra low noise				
WLAN	Some: 11ac wireless, Wi-Fi + Blueto	ombo adapter, 1	x1 `	,		MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperatur Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Sh Fungus, Solar Radiation)					
	Some: 11ac wireless	d, Realtek RTL8 ombo adapter, 2	822BE (dual band),		Accessories	For compatible acces	<u> </u>	to http://emartfine	Llonovo com		
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirele	ess-AC 3165,		70063201162	i or compatible acces	ssories, piease go	to mup.//smartime	i.ieii0vo.coiii	
			ombo adapter, 1		000 AC 9065							
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),											
	Wi-Fi + Blueto	oth 5.0 c	ombo adapter, lı	ntel vPro	technology sup	port, 2x2						



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pen	tium®. or 8	th / 9th Gen Intel C	Core™ i3	/ i5 / i7 / i9 Process	or		4x Mini DisplayPo	ort, up to 4 independent displays, works	s along with
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	onboard DP and HDMI to support up to 6 independent displays; Max resolution: 5120x2880@60Hz ((up to 2 Mini DisplayPort);			splays;
		Threads	Base/Max(GHz)		(Up to)	Graphics	4		4096x2160@60Hz ((up to 4 Mini Displ	avPort)
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	Monitor cable	Optional DP to VGA dong	le, DP to DVI-D dongle, DP to dual DP o ics), or DP to HDMI 1.4 dongle, Mini DF	dongle (for Collage Display
	Celeron G4920 Celeron G4930	2/2	3.2G 3.2G	2 MB 2 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 610	Chipset	Intel Q370 Chipset	iles), of DF to Fibini 1.4 dorigle, Milli DF	TO DE
	Celeron G4950	2/2	3.2G 3.3G	2 MB	DDR4-2400 DDR4-2400	UHD 610	1∟	·		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400 DDR4-2400	UHD 610	Front ports (Std.)*	one USB 3.1 Gen1 (Alway	ys On and fast charge), one USB 3.1 Typ , one headphone / microphone combo ja	pe-C Gen 1,
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Rear ports (Std.)*	2x USB 3.1 Gen2, 2x USE	3 3.1 Gen1, 1x ethernet (RJ-45), 1x DP,	1x HDMI
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Rear ports (Opt.)*	Two optional ports (mutua	ally exclusive with PCIe card): Port 1 for	VGA / 2nd DP / 2nd HDMI /
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Optional ports via PCIe ca	en 1 with DP function); Port 2 for serial; ard: 2x USB 3.1 Gen1 via PCle x1, 4x se	erial (9-pin) via PCle x1. 1x
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo US	B3.1 Type-C Gen 2 / DP) via PCIe x4	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	1		tors, actual data transfer speed may be	· · · · · · · · · · · · · · · · · · ·
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / opt	tional internal speaker (1.5 watt or 2 wat	it)
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN		4.2, M.2 Card, Realtek RTL8821CE (du	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT	4.2, M.2 Card, Realtek RTL8822BE (du 4.2, M.2 Card, Intel Dual Band Wireless	al band), 2x2 ∆C 3165, 1y1
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT	4.2, M.2 Card, Intel Dual Band Wireless	s-AC 8265, 2x2
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT	5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Bluetooth	Some: Bluetooth 4.2/5.0	ology support, 2x2) wireless, integrated in Wi-Fi + BT coml	bo adapter
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Eth	ernet Connection I219-LM(Jacksonville)), Wakė on LAN®
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)		ver Adapter I350-T4, gigabit ethernet, 4	x RJ-45, PCle x4
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability		Technology 12 (Intel AMT 12);	ourne art M/: E:
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630]	adapter to enable vPro ful	some models (require choosing a vPro-s nction through wireless connection)	support wi-Fi
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG C		
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features	 Security slot (in rear for 		
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610		 Kensington® MicroSaver Chassis intrusion switch 		ooard and mouse
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		Power-on password	 Smart USB protect 	ction, allows keyboard/
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		 Administrator password 	mouse only, block	s all storage devices
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		Hard disk password	14 1 14100	
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610	Keyboard	Some: Lenovo Calliope	Keyboard (USB connector), black al Keyboard (USB connector), black	
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630	4	Some: Lenovo Calliope	Wireless Keyboard (2.4GHz via USB re	ceiver), black
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope	Mouse (USB connector), black	lalla august black
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	4	Some: Lenovo Calliope	int Mouse (USB connector), Windows H Wireless Mouse (2.4GHz via USB recei	iver). black
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color; met	· · · · · · · · · · · · · · · · · · ·	,,
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	- Inviceriarilear	 Toolless chassis open (r 	need optional toolless chassis screw)	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	-	Toolless HDD, SSD, me Ontional dust filter.	mory removal	
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB 8 MB	DDR4-2400	UHD 630 UHD 630	-	 Optional dust filter one 2.5" bay for HDD/SSI 	D, one PCIe 3.0 x8 slot (low-profile), thre	ee M 2 slots (one for WLAN
	Core i3-9300T Core i5-9400T	4 / 4 6 / 6	3.2G / 3.8G 1.8G / 3.4G	9 MB	DDR4-2400 DDR4-2666	UHD 630	-		DD/SSD and PCIe card are mutually exc	
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630	1		Dimensions (WxDxH)	Weight (Approx.)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	1	Tiny only	7.05" X 7.20" X 1.36"	2.91 lb (1.32 kg),
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630	1	Tilly Offiny	179mm X 182.9mm X 34.5mm	vary by config
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630	1	With VESA mount &	7.42" X 7.30" X 2.48"	3.66 lb (1.66 kg),
						0110 000	4	ODD box	188.4mm X 185.38mm X 63mm	vary by config
Memory	32GB max, DDR4-2666* * System automatically c	locks down	for the processors	s with low	er memory control	ler	VESA mount Floor Stand	Optional VESA mount bra Optional system floor star	cket kit, supports VESA 75mm and 100 nd for vertical orientation	mm
Storage	Some: Hard Drive / SA Some: Solid State Drive	TA 6.0Gb/s	, 2.5", 5400 rpm o	r 7200 rp	m		Power supply	135 watts AC/DC adapter	. autosensing, 88% PSU	
	Some: M 2 SSD (suppo	ort un tó tw	n M 2 SSD) / PCIe	NVMe,	PCIe 3.0 x 4*, 32GI	b/s.	Limited warranty		r, depot service / service upgrades ava	ailabla
	RAID 0/1 suppo	rt (RAID n	reset only available	via sneo	cial hid model)		Limited warranty		r, limited onsite service / service upgra	
	* 128GB SSD M.2 (2242 Some: Intel Ontane™ N) PCIE NVI Jemory (no	vie only supports F at support Celeron	/Cle 3.0) / Pentiun	(2, 16Gb/s Processor) M.2		Preload	Some: Windows® 10 Pr	ro 64-bit	
Optical	Some: Intel Optane™ N Some: DVD-ROM, slim	(9.0mm),	via USB external C	DD box	11 10000001), W.L			Some: Windows 10 Ho	me 64-bit	
Onboard SATA	Some: DVD Burner (D\ One onboard SATA 6.0G	/D±RW), s b/s connec	lim (9.0mm), via U tor	SB exteri	nal ODD box		Environment		EAT™ Gold rating (North America), ErPed (coming soon, on some models), Rob	
Graphics	Intel HD Graphics 610/6	30 in proc	essor, uses main n	nemory, [DirectX® 12, one Di	splayPort™,	MIL-SPEC test		ertification (Low Pressure [Altitude], High	<u> </u>
	one HDMI, one optional or USB 3.1 Type-C Gen1 Max resolution:c4096x23	with Display	ayPort function), up	o to 3 ind			57 20 1001	Low Temperature, Temper Solar Radiation)	rature Shock, Humidity, Sand and Dust,	Vibration, Shock, Fungus,
		216Ò (ońbo	ard HDMI)@24Hz	. 2048x1	536 (VGA)@50Hz		Accessories	For compatible accessorie	es, please go to http://smartfind.lenovo	o.com













ThinkCentre Tiny-in-One (TIO) 22 Gen3

Model	Non-touch model: Touch model:	10R1PAR1++/10R1P 10R0PAR1++/10R0P						
Form factor	Tiny-in-One, offers		ience when optional Tiny slots into					
		ean cabling and effortle	•					
Compatible Tiny:		` '	/ M710 / M900(x) / M700 / M630e /					
	M625 / M600 / M75q / M715 / M93/p* / M83 / M73* / M53 /Chromebox Tiny * Non-TIO models can't be turned on by pressing power button of TIO							
Panel			*, White LED backlight					
Viewahla imaga siza			A, PLS, and IPS panels					
Viewable image size Max view area (W x H)	21.5" (546.1mm) d 18 74" x 10 54" / 4	76.1mm x 267.8mm						
Bezel Width	Top / Side: 2mm, B							
Native resolution	1920x1080	10.1	, ,					
Multi-touch Aspect ratio	Optional 10-point n	nulti-touch, supports W	ake on louch					
Pixel pitch (mm)	0.24795mm							
Dot/Pixel per Inch	102.4 dpi							
Brightness	250 nits or cd/m ² (t	ypical)						
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms						
Color gamut	72%	or drive to 4mo, eme						
Anti-reflective	Anti-glare							
Viewing angle at 10:1 CF	R178° (+/- 89°) horiz	contal, 178° (+/- 89°) ve	ertical					
Preset resolutions	640x350 @ 70Hz	CCLI- 70LI- 75LI-						
	640x480 @ 60Hz, 720x400 @ 70Hz	66HZ, /2HZ, /5HZ						
	800x600 @ 60Hz,	72Hz, 75Hz						
	1024x768 @ 60Hz	, 70Hz, 75Hz						
	1152x864 @75Hz							
	1280x800 @ 60Hz 1280x1024 @ 60H							
	1366x768 @ 60Hz							
	1440x900 @ 60Hz							
	1600x1200 @ 60H 1680x1050 @ 60H							
	1920x1080 @ 60H							
Presets / user settings	Presets: 25; user s							
On screen display		with digital user contro						
Control features	Ftont: Exit button	n, Left / Mode-switchin	g button (TIO / monitor mode),					
		o button, Volume down	Menu button, Power button					
Tiny-in-One Power On			Power button positioned on TIO					
. (=10)	can turn on both TI	O and Tiny (only some	Tiny support, see compatible list)					
Side ports (TIO)			3 or M53 installed or USB 2.0					
	connected via USE Notes: The USB p		nen a Tiny is istalled or a PC is					
	connected	via USB upstream por	t					
Side ports (Tiny)	Side ports offered	by installed Tiny (optio	nal)					
Rear ports 3-in-1 Cable			am port, one power connector cter, USB [supports USB 3.1 Gen1]					
O III I Oabic			ing to Tiny installed (optional)					
Camera		dual microphone for V						
Internal Speaker	2 watt x2							
Security			al cable lock (Kensington® lock					
	offered by Tiny inst		together, more security features					
Mechanical	Dimensions	TIO without stand	TIO with stand					
	W x D x H (inch)	19.26 x 2.85 x 13.35	19.26 x 10.76 x 14.59 - 18.93					
	W x D x H (mm)	489.3 x 72.5 x 339	489.3 x 273.3 x 370.7 - 480.7					
	Weight (Approx.)	7.01 lb / 3.19 kg	11.77 lb / 5.34 kg					

	Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
0	Adjustable stand	Tilt: 30° back, -5° forward; lift: 4.3" (110mm);
: /		swivel: +/-45°; Pivot: clockwise 0° to 90°
/	Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 19 watts typical, 32 watts maximum, <0.5 watts standby / suspend
	Limited warranty	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
	VESA-compliant Ergonomics Emission standards	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307, TUV Eye Comfort certified FCC Class B
	Environmental Windows certifications	TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0, EPEAT™ Silver rating, ULE Gold, TUV, VOC Windows 7 and Windows 10 certified
	Ship group	TIO (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
		·

	ThinkCentre Tiny-in-One 22 Gen3 Compatible list										
Model	P330 / P320 / M920(x) / M720 / M910(x) / M93/p Tiny, Ch M710 / M900(x) / M700 / M630e / M625 / M73 Tiny										
	M600 / M75q / M715 / M83 / M53 Tiny										
	M90n Nano (with TIO kit)										
Turn on TIO and											
Tiny together via	All models	All models	Not support								
Alt + P on USB KB											
Turn on TIO and											
Tiny together via	All models	TIO models	All models								
TIO Power Button											













ThinkCentre Tiny-in-One (TIO) 24 Gen3

Model	Non-touch model: Touch model:	10QYPAR1++/10QYPA 10QXPAR1++/10QXPA								
Form factor			ence when optional Tiny slots into							
Compatible Tiny:	P330 / P320 / M92 M625 / M600 / M75	the back of TIO, clean cabling and effortless setup P330 / P320 / M920(x) / M720 / M910(x) / M710 / M900(x) / M700 / M630e / M625 / M600 / M75q / M715 / M93/p* / M83 / M73* / M53 /Chromebox Tiny * Non-TIO models can't be turned on by pressing power button of TIO								
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight									
Viewable image size Max view area (W x H) Bezel Width Native resolution Multi-touch	23.8" (604.7mm) d 21.06" x 12.32" / 5 Top / Side: 2mm, B 1920x1080	Notes: In-Plane Switching may refer to VA, PLS, and IPS panels 23.8" (604.7mm) diagonal 21.06" x 12.32" / 535.0mm x 313.0mm Top / Side: 2mm, Bottom: 22.1mm 1920x1080 Optional 10-point multi-touch, supports Wake on Touch								
Aspect ratio Pixel pitch (mm)	16:9 0.2745mm	, ,,								
Dot/Pixel per Inch	92.6 dpi	t D								
Brightness Contrast ratio	250 nits or cd/m ² (t 1000:1 (typical)	ypicai)								
Pixel response time Color gamut	14ms (default), ove 72%	er drive to 4ms, 6ms								
Anti-reflective	Anti-glare		4:1							
Viewing angle at 10:1 Cl Preset resolutions	640x350 @ 70Hz	zontai, 178° (+/- 89°) ver	Tical							
1 1030t 1030idiloli3	640x480 @ 60Hz,	67Hz, 72Hz, 75Hz								
	720x400 @ 70Hz 800x600 @ 60Hz,	72Hz. 75Hz								
	1024x768 @ 60Hz									
	1152x864 @75Hz 1280x800 @ 60Hz									
	1280x1024 @ 60H 1366x768 @ 60Hz									
	1440x900 @ 60Hz									
	1600x1200 @ 60H 1680x1050 @ 60H									
	1920x1080 @ 60H	z								
Presets / user settings	Presets: 25; user s		(0.100000000)							
On screen display Control features	Ftont: Exit butto Right / B	rightness button, Enter /	button (TIO / monitor mode), Menu button, Power button							
Tiny-in-One Power On		ip button, Volume down n kevboard or pressing F	Power button positioned on TIO							
	can turn on both TI	O and Tiny (only some	Tiny support, see compatible list)							
Side ports (TIO)	connected via USE Notes: The USB p	B upstream port) ort is only available whe	or M53 installed or USB 2.0 In a Tiny is istalled or a PC is							
Side ports (Tiny)		via USB upstream port by installed Tiny (options	al)							
Rear ports	One DisplayPort in	port, one USB upstrear	n port, one power connector							
3-in-1 Cable			er, USB [supports USB 3.1 Gen1 to Tiny installed (optional)							
Camera Internal Speaker		dual microphone for VC								
Security		optional Tiny with TIO to	cable lock (Kensington® lock gether, more security features							
Mechanical	Dimensions	TIO without stand	TIO with stand							
	W x D x H (inch)	21.25 x 2.85 x 14.47	21.25 x 11.11 x 15.72 - 20.06							
	W x D x H (mm)	539.8 x 72.5 x 367.6	539.8 x 282.3 x 399.4 - 509.4							
	Weight (Approx.)	7.96 lb /3.61 kg	12.92 lb /5.86 kg							

Mounting features Adjustable stand	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Tilt: 30° back, -5° forward; lift: 4.3" (110mm);
/	swivel: +/-45°; Pivot: clockwise 0° to 90°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 19 watts typical, 32 watts maximum, <0.5 watts standby / suspend
Limited warranty	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
VESA-compliant Ergonomics Emission standards Environmental	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307, TUV Eye Comfort certified FCC Class B TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0, EPEAT™ Silver rating, ULE Gold, TUV, VOC
Windows certifications	Windows 7 and Windows 10 certified
Ship group	TIO 24 (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com

	ThinkCentre Tiny-in-One 24 Gen3 Compatible list										
Model	P330 / P320 / M920(x) / M720 / M910(x) / M710 / M900(x) / M700 / M630e / M625 / M600 / M75q / M715 / M83 / M53 Tiny M90n Nano (with TIO kit)	1 27	Chromebox								
Turn on TIO and Tiny together via Alt + P on USB KB	All models	All models	Not support								
Turn on TIO and Tiny together via TIO Power Button	All models	TIO models	All models								













ThinkCentre Tiny-in-One (TIO) 27

Form factor	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into the back of TIO, clean cabling and effortless setup	Mechanical		TIO without stand	TIO	with stand				
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny		Dimensions (W x D x H	614.0 x 73.89 x 413.1	614.0 x 329.0) x 444.25 - 554.25				
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight **Notes: In-Plane Switching may refer to IPS, PLS, ADS, AHVA, and AA		mm / inch)	/ 24.17 x 2.91 x 16.26	/ 24.17 x 12.	95 x 17.49 - 21.82				
Viewable image size Max view area (W x H)	27" (685.8mm) diagonal 23.49" x 13.22" / 596.7mm x 335.7mm		Weight (Approx.)	4.91 kg / 10.82 lb	7.95 k	g / 17.53 lb				
Bezel Width Native resolution Multi-touch Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch	Top / Side: 2mm, Bottom: 23.3mm 2560x1440 None 16:9 0.2331mm 109 dpi	Mounting features Adjustable stand	Adjustable stand meeting the VESA FPMPMI® (100mm mount) Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°;							
Brightness Contrast ratio	350 nits or cd/m² (typical) 1000:1 (typical)	Power supply		, 88% PSU, universal						
Pixel response time Color gamut	14ms (default), over drive to 4ms, 6ms 99% sRGB	Power consumption Limited warranty		7 watts maximum, <0.5 Exchange Service (US						
Anti-glare	Yes (25%)	Limited warranty	Service (EMEA)	exchange Service (US	and EIVIEA) or	Customer Carry-in				
Viewing angle at 10:1 C	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical 640x350 @ 70Hz 640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz 800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz 1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1440x900 @ 60Hz, 72Hz, 75Hz 1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1680x1050 @ 60Hz 1920x1080 @ 60Hz	VESA-compliant Ergonomics Emission standards Environmental Windows certification Ship group Accessories Model	ISO 9241-307, TU FCC Class B TCO 8.0, TCO Edi EPEAT™ Silver rat Windows 7 and W TIO 27 (Monitor), and driver CD For compatible act ThinkCentre Tiny P330 / P320 / M920(x)	\ /	ENERGY STAFOC er adapter, power http://smartfinde. Matrix M93/p Tiny,	er cord, reference				
Presets / user settings On screen display	2560x1440 @ 60Hz Presets: 27; user settings: 25 On screen display with digital user controls (8 languages)		M710 / M900(x) / M70 M600 / M75q / M715 M90n Nano (w	/ M83 / M53 Tiny	M73 Tiny					
Control features	Ftont: Exit button, Left / Mode-switching button (TIO / monitor mode), Right / Brightness button, Enter / Menu button, Power button Bottom: Volume up button, Volume down button	Turn on TIO and Tiny together via Alt + P on USB KB	All mod	dels	All models	Not support				
Tiny-in-One Power On Side ports (TIO)	Pressing Alt + P on keyboard or pressing Power button positioned on TIO can turn on both TIO and Tiny (only some support, see Compatible Matrix) Two USB 3.1 Gen1 (downgrade to USB 2.0 when installing M73 or M53 or connecting USB 2.0 via USB upstream port), one headphone / microphone	Turn on TIO and Tiny together via TIO Power Button	All mod	dels	TIO models	All models				
Side ports (Tiny) Rear ports 3-in-1 Cable Camera Internal Speaker Security	combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream, DisplayPort(in), or HDMI(in) port Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional) RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator 2 watt x2 Security keyhole for attachment of optional cable lock (Kensington® lock compatible), locks optional Tiny with TIO together, more security features offered by Tiny installed (optional)									













ThinkCentre M710 Tower Platform Specifications

Processor	Intel® Celeron®, Int	el Pentiur	m®, or 6/7th Gene	eration Ir	ntel Core™ i3 / i5 /	i7 Processor	Manageability	None
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)		Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510	Security features	• Security slot (in rear for optional • Power-on password
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		Kensington® MicroSaver® cable) • Administrator password
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		 Padlock loop Smart USB protection, allows keyboard/ Boot sequence control
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		mouse only, blocks all storage devices • Boot sequence control • Boot without keyboard and mouse
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Optional cable lock to physically lock Individual USB port disablement
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		both keyboard and mouse • Optional chassis intrusion switch
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Some: Lenovo Traditional Keyboard (USB connector), black
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mechanical	Tower (15L), black color, metal case
Memory	64GB max, UDIMN dual-channel capal * System automatic	ble cally clock	ks down for the p	rocessor	rs with lower mem	ory controller		 (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter Bay 1: Slim external ODD bay
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S Some: Intel Optan	Drive (St State Driv	SD) / SATA 6.0GI e (SSD) / PCIe N	b/s, 2.5" IVMe, P0	Cle 3.0 x 4, 32Gb/	's		Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 3.5", 1" high, internal, HDD/SSD Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1*
Optical	Some: DVD-ROM Some: DVD Burne	SATA 1.5	Gb/s Drive, slim	(9.0 mm))			Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1* Slot 4: no slot, only bracket for optional port extension*
Onboard SATA Media reader		hree onboard SATA 6.0Gb/s connectors Optional 7-in-1 media reader						M.2 card slots: Two (one for WLAN, one for SSD/Optane) * Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 slot (x4 card)
Graphics	Intel HD Graphics						opti	optional rear 2x USB2.0 / parallel occupies one expansion slot
	discrete graphics to Max resolution: 409	GA, two DisplayPort™, supports 3 independent displays, works along with the graphics to support more displays; esolution: 4096x2304 (DP)@60Hz; 2048x1536 (VGA)@50Hz NVIDIA Geforce® GT 730, DirectX 12, 2GB, PCIe 2.0 x8 adapter,					Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)
	two Display <i>Max resolu</i> :	Port, 35 v <i>tion:</i> 3840	vatts;)x2160 (DisplayP	ort)@60	Hz;	- ,	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
		ne HDMI	, 75 watts, occup	ies two s		985Hz	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64 listed) Preloaded applications (only some listed)
Monitor Cable	Optional DP to VG	A, DP to I						preinstalled through downgrade • Microsoft Office preloaded; rights in Windows 10 Pro 64-bit purchase a product key to activate
Chipset Front ports*	Four USB 3.1 Gen		ol two LICE 2.1 To	ma C Cc	on 2 (only ovoilable	a via aposial		(not available with 7th Gen Intel - Only for Window 10 processor) • Lenovo Companion
	bid), microphone (3 Two USB 3.1 Gen1	3.5mm), h	neadphone (3.5m	im)				Some: Windows 10 Pro 64-bit - Only for Window 7 Some: Windows 10 Home 64-bit - Lenovo Solution Center
Rear ports*	serial (9-pin), optio two PS/2 ports (key	nal parall yboard/m	el (25-pin), ether ouse);	net (RJ-	45), one VGA, two	DisplayPort,		 Lenovo ThinkVantage Tools Create Recovery Media Adobe® Reader®
Rear audio ports* IEEE 1394*	additional VGA, Dis Line-in (3.5mm), lir None	ne-out (3.	5mm), microphoi	ne-in (3.5	5mm)	oueis		 Cyberlink PowerDVD Create (DVD±RW)
	* Depending on many	/ factors, ac	ctual data transfer s	speed may	be lower than theor	retical speed	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),
Audio support	High Definition (HD) Audio, I	Realtek ALC662	/ optiona	al internal speaker	(1.5 watt)]	ErP Lot 3, GREENGUARD®, RoHS-compliant, TUV low noise verified (on some models)
WLAN ¹³	Some: 11ac wirele				QCA9377A (dual	band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
	Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2				QCA6174A (dual	band),	Accessories	roi companible accessories, please go to mtp.//www.ieriovoquickpick.com
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (letooth 4.	Card, Intel Dual E 1 combo adapter	Band Wir ; 1x1				
	Some: 11ac wirele Wi-Fi + Blu	etooth 4.	1 combo adapter	: 2x2				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, R None	4.1 wireles	ss, integrated in \	Wi-Fi + E	BT combo adapter			
							I	













ThinkCentre M715 Tower Platform Specifications

Processor	AMD A6 / A8 / A10 / A1	12 series AF	PU and Ryzen :	3 / 5 / 7 series	s processor	Manageability	DASH		
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS		
	Ryzen 3 PRO 1200	4/4	3.1 / 3.4	2MB	None	Security features	Security slot (in rear for optional Power-on password		
	Ryzen 3 PRO 1300	4/4	3.5 / 3.7	2MB	None		Kensington® MicroSaver® cable) • Administrator password • Hard disk password		
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		 Padlock loop Smart USB protection, allows keyboard/ Hard disk password Boot sequence control 		
	Ryzen 7 PRO 1700	8 / 16	3.0 / 3.7	4MB	None		mouse only, blocks all storage devices • Boot sequence control		
	PRO A6-8570	2/2	3.5 / 3.8	1MB	Radeon R5 Series		 Optional cable lock to physically lock Individual USB port disablement 		
	PRO A10-8770	4/4	3.5 / 3.8	2MB	Radeon R7 Series		both keyboard and mouse • Optional chassis intrusion switch		
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
	PRO A8-9600	4/4	3.1 / 3.4	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
	PRO A10-9700	4/4	3.5 / 3.8	2MB	Radeon R7 Series		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black		
	PRO A12-9800	4/4	3.8 / 4.2	2MB	Radeon R7 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black		
Memory	64GB max, UDIMM, DI dual-channel capable * System automatically		·		•	Mechanical r	 Tower (15L), black color, metal case (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter 		
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	/e (SSD) / S · Drive (SSI	SATA 6.0Gb/s, 2 0) / PCIe NVMe	2.5" e, PCle 3.0 x 4			Bay 1: Slim external ODD bay Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD		
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), S	ATA 1.5Gb/s D		mm)		Slot 1: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCIe 2.0 x1*		
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader					Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 2.0 x Slot 4: no slot, only bracket for optional port extension* M.2 card slots: two (one for WLAN, one for SSD) * Optional front USB3.1 Type-C x2 module occupies PCle x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot		
Graphics	AMD Radeon™ Graph memory, DirectX® 12, of are invalid on the mode displays, works along w	one VGA, twels with AMI	o DisplayPort™ DRyzen proces	' (Onboard V(ssor), support	GA and DP ports s 3 independent	1			
	Max resolution: 4096x2 Some: NVIDIA Geforce two DisplayPort	:160 (DP)@ e® GT 730 , , 35 watts;	60Hz; 1920x12 DirectX 12, 2G	200 (VGA)@6 B, PCle 2.0 x	0Hz	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 210 watts, autosensing, 92% PSU (only available via special bid)		
	Max resolution: Some: AMD Radeon™ one VGA, one H	RX 550, D IDMI, one D	irectX 12, 2GB DisplayPort, 50	PCIe 3.0 x8 watts, occupio	es two slots;	Limited warranty Preload	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system		
Monitor Cable	Max resolution:	5120x2880	(DP)@60Hz		,	1 101044	Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (Only available with Pro A6/A10/A12-8xxx APUs)		
	Optional DP to VGA, DI	ר נס טעו-ט	(single link), DF	to dual DP, C	OF DP to HUMI 1.4	_	Some: Windows 10 Pro 64-bit		
Chipset	AMD B350 Chipset						Some: Windows 10 Home 64-bit Preloaded applications (only some listed)		
Front ports*	Two USB 3.1 Gen2, two						Microsoft Office preloaded;		
Rear ports*	available via special bid Two USB 3.1 Gen1, two						purchase a product key to activate		
rical porto	2nd serial (9-pin), optio	nal parallel	(25-pin), ether	net (RJ-45), o	ne VGA and two		- Only for Window 10		
	DisplayPort (not availab	ole on mode	els with AMD R	yzen process	or),		 Lenovo Companion Only for Window 7 		
	two PS/2 ports (keyboa	rd / mouse)); .h.a.l		and a second also		Lenovo Solution Center		
Rear audio porto	additional VGA, Display				some modéls		Lenovo ThinkVantage Tools		
Hear audio ports IEEE 1394*	Line-in (3.5mm), line-ou None	ມເ (໒.ɔmm),	mcropnone-in	(J.Smm)			Create Recovery Media		
	* Depending on many factor	ors, actual da	ta transfer speed	may be lower t	han theoretical speed		Adobe® Reader® Cyberlink PowerPMD Create (DMD) PMM		
Audio support	High Definition (HD) Au		•			Environment and	Cyberlink PowerDVD Create (DVD±RW) Children (North America)		
WLAN	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, F	Realtek RTL882	1AE (dual ba	, ,	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant		
	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, C	Qualcomm Athe	ros QCA6174	1A (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com		
	Some: 11ac wireless, l Wi-Fi + Bluetoo	M.2 Card, C	Qualcomm Athe	ros QCA9377	7 (dual band),				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 o Gigabit ethernet, Realte None	r 4.1 wirele	ss, integrated in	n Wi-Fi + BT o	combo adapter				
	-								













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th / 9th Gen	Intel Co	ora™ i3 / i5 / i7 / i0	Processor	Μ/Ι ΔΝΙ13	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),
1 10063301		Cores /	Frequency		Memory Support		VVLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	DI t tl. TM	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt)	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8300	4/4 6/6	3.7G 2.8G / 4.0G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Bitland BN8E88*, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)
	Core i5-8400 Core i5-8500	6/6	3.0G / 4.1G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630		* Choose either I350-T4 or BN8E88
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Manageability	None
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Security features	• Security slot (in rear for optional • Power-on password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) ◆ Administrator password
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
Memory	64GB max, UDIMM,	DDR4-26	66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
•	dual-channel capable							Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	* System automatical	,				y controller	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
Storage	Some: Hard Drive / S	SATA 6.00	3b/s, 2.5" or 3.5"	, 5400 rp	om or 7200 rpm			Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Some: Solid State D Some: M.2 SSD (22)	rive (SSL 42 / 2280) / SAIA 6.0GD/S) / PCIA NVMA F	5, 2.5" PCIA 3 0	v2 or PCIa 3.0 v/	1		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	Some: Intel Optane [™]						Mechanical	• Tower (15L), black color, metal case
Optical	Some: DVD-ROM S	ATA 1.5G	b/̀s Drivė, slim (9	.0mm)		,,	IVIECHALIICAI	• (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm
Only a sud CATA	Some: DVD Burner			Drive, s	slim (9.0mm)			Approx. 15.21 lb (6.9 kg), weight may vary by configuration
Onboard SATA Media reader	Three onboard SATA Optional 7-in-1 media		connectors					Optional dust filter
Graphics	Intel UHD Graphics		n processor use	c main r	nomory DiroctV®	10	-	Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD
Graphics	one VGA (up to 2048							Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)
	supports 3 independe	ent displa	ys, more displays	suppor	t via discrete grap	ohics		Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16
	Some: NVIDIA Gefor	rce® GT 7	30 (End Of Life)	DirectX	12, 2GB, PCle 2	.0 x16,		Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1
	Some: AMD Radeon	DisplayPo	ort (up to 3840x2	160@60	IHZ) POIA 3 0 v8 30 v	atte		Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension
			1096x2160@60F		1 CIE 3.0 X0, 30 W	raiis,		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	Some: AMD Radeon	າ RX 550)	, DirectX 12, 4G	B'GDDF	R5, PCIe 3.0 x8, 5	50 watts,	Power supply	Some: 180 watts, autosensing, 85% PSU
			3840x2160@60H				1 ower suppry	Some: 210 watts, autosensing, 85% PSU
Monitor Cable	Optional DP to VGA	donale D	e VGA (up to 20- P to DVI-D donal	48X 1536 A DP to	'⊌85HZ) dual DP dondle (for Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
oo. Gabio	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	.4 dongle	ioi oollage	Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available
Chipset	Intel B360 Chipset	<u> </u>	. ,,				1	Some: 1-year or 3-year, limited onsite service / service upgrades available
	2x USB 3.1 Gen2, 2x	/ LICE 2.1	Cont 1v LISB 3	1 Typo	C Con1 (15W ob	orging)	Preload	Preloaded operating system
From ports (Stu.	1x microphone (3.5m	nm). 1x he	adphone / micro	nhone c	ombo jack (3.5mr	aigiiig), n)		Some: Windows® 10 Pro 64-bit
Front ports* (Opt.	1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) Front ports* (Opt.) Optional: 1x media reader							Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Rear ports* (Std.) 4x USB 2.0, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,								Lenovo Vantage
1x line-out (3.5mm)								Microsoft Office preloaded;
Rear ports (Opt.	orts* (Opt.) Optional: 2x USB 3.1 Gen1 via PCle x1**, 2x USB 3.1 Type-C Gen2 via PCle x4** (special bid only), 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1,							purchase a product key to activate
	1x parallel (25-pin), 2	2 PS/2 pc	rts (kevboard/m	u (ə-piii) ouse), ad	dditional RJ-45 ar	nd video		Cyberlink PowerDVD (only for models with DVD / DVD±RW)
	ports available on opt	tional grap	phics or ethernet	card				 Cyberlink Power2GO (only for models with DVD±RW) LinkedIn
	* Depending on many fa					tical speed	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
A., ali a	** Choose either 2x USE		**			ш \	LIMIOIMIEM	TUV low noise verified (coming soon, on some models), RoHS-compliant
Audio support	High Definition (HD)	Audio, Re	aitek ALC233VB	2 / Interr	nai speaker (2 wa	tt)	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
							7 10003301103	1 of companion accessories, please go to map in a maneriovo.com













ThinkCentre M910 Tower Platform Specifications

			® 0/711 O				le	0: 1: 1									
Processor	Intel® Celeron®, Int			eration In	i i		Ethernet Modem	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN None									
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Manageability	Intel Active Management Technology 11.0 (Intel AMT 11.0);									
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi									
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	Security chip	adapter to enable vPro function through wireless connection) TPM (Trusted Platform Module) 2.0, TCG Certified									
	Core i3-7300	2/4	4.0G /	4 MB	DDR4-2400	HD 630		* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS									
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Security features	Security slot (in rear for optional Power-on password									
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		Kensington® MicroSaver® cable) • Administrator password									
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		 Padlock loop Smart USB protection, allows keyboard/ Hard disk password Boot sequence control 									
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		mouse only, blocks all storage devices • Boot sequence control • Boot sequence control									
Memory	64GB max, UDIMN dual-channel capal	hĺa	, , , , , , , , , , , , , , , , , , ,		,	*		 Optional cáble lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch 									
Otawa	* System automation	Cally Clock	OCh/a O FII ar O	TIL FACO	S WILLI IOWEL THEIL	ory controller	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black									
Storage	Some: Hard Drive Some: Solid State	Drive (S	.0Gb/s, 2.5 or 3. SD) / SATA 6.0G	.5", 5400 h/s. 2.5"	rpm or 7200 rpm			Some: Lenovo Traditional Keyboard (USB connector), black									
	Some: M.2 Solid S	State Drive	e (ŚSD) / PCIe N	IVMe, PO	Cle 3.0 x 4, 32Gb	/s	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black									
	Some: Intel Optan	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black									
Optical	Some: Front accessome: DVD-ROM	SSIDIE AND	5Gb/s 5 25" or), 3.5", 10 slim (9 Ni	ckable via priysic: mm)	агкеу	Mechanical	Tower (18L), black color, metal case									
Optioai	Some: DVD Burne	er (DVD±F	RW), SATA 1.5GI	b/s, 5.25'	or slim (9.0mm)			• (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm									
Onboard SATA	Four onboard SATA	4 6.0Gb/s	connectors (1x	eSATA ar		D 0/1 support		 Approx. 15.45 lb (7 kg), weight may vary by configuration Toolless cover, disk, optical, graphic card removal 									
Media reader	(RAID preset only a Optional 7-in-1 me			odel)				Optional carry handle, dust filter									
Graphics	Intel HD Graphics			ecor He	es main memory	DirectY® 12		Bay 1: Slim external ODD bay									
Graphics	one VGA, two Disp	olayPort™.	supports 3 inde	pendent	displavs, works a	long with		Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD									
	discrete graphics to	o support	more displays;			Ü		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)									
	Max resolution: 409 Some: NVIDIA Ge					or		Bay 5: 2.5", internal, HDD/SSD (optional bay)									
	two Display			L, 20D, I	Ole 2.0 X0 adapt	GI,		Notes: M910 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)									
	Max resolu	tion: 3840	x2160 (DisplayP	ort)@60	Hz;			Slot 1: full-length full-height (length < 268mm, height < 112mm), PCIe 3.0 x16*									
		Come: AMD Radeon™ R7 350, DirectX 11, 2GB, PCIe 3.0 x8 adapter, one VGA, one HDMI, 75 watts, occupies two slots;						Slot 2: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x1*									
					1015, 148x1536 (VGA)@	985Hz		Slot 3: full-length full-height (length < 268mm, height < 112mm),									
	Some: NVIDIA Ge	force GT	X™ 1080 (onlý a	vailable v	ia special bid mo			PCIe 3.0 x16 (x4 signal)* Slot 4: no slot, only bracket for optional port extension*									
					VI-D, one HDMI,			M.2 card slots: Two (one for WLAN, one for SSD/Optane)									
		three DisplayPort, 180 watts, occupies two slots; Max resolution: 2560x1600 (DVI-D)@60Hz: 4096x2160 (HDMI)@60Hz					Max resolution: 2560x1600 (DVI-D)@60Hz; 4096x2160 (HDMI)@60Hz							* Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 (x4 signal optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot			
Manitan Calala		7680	x4320 (with Sing	gle DP)@	60Hz		Danis	· · · · · · · · · · · · · · · · · · ·									
Monitor Cable	Optional DP to VG		DVI-D (single link	(), DP to	dual DP, or DP to	HDMI 1.4	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 250 watts, autosensing, 85% PSU									
Chipset					0 / 1 111			Some: 400 watts, autosensing, 92% PSU (only available via special bid)									
Front ports* Rear ports*	Four USB 3.1 Gen bid), microphone (3 Four USB 3.1 Gen	3.5mm), h	eadphone (3.5m	im)	` ,	·	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available									
ricai porto	optional parallel (2)	5-pin), eth	nernet (RJ-45). o	ne VGA.	two DisplayPort.	optional two	Preload	Preloaded operating system									
	PS/2 ports (keyboa	ard/mouse	e);			•		Some: Windows® 7 Professional 32/64 listed)									
Rear audio porto	additional VGA, Dis	spiayPort,	טעו-ט, or HDMI	on optio	nai graphics on s	ome models		preinstalled through downgrade • Microsoft Office preloaded;									
IEEE 1394*	Line-in (3.5mm), lir None	ne-out (3.	omm), microphoi	ne-in (3.5	инт)			rights in Windows 10 Pro 64-bit purchase a product key to activate (not available with 7th Gen Intel - Only for Window 10									
	* Depending on many	/ factors, ac	ctual data transfer s	speed may	be lower than theo	retical speed		processor) • Lenovo Companion									
Audio support	High Definition (HD	D) Audio, F	Realtek ALC662	/ optiona	l internal speaker	(1.5 watt)		Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit - Only for Window 7 • Lenovo Solution Center									
WLAN	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1							Lenovo Think Vantage Tools Create Recovery Media									
	Some: 11ac wirele	ess, M.2 C	Card, Qualcomm	Atheros	QCA6174A (dual	band),		 Adobe® Reader® 									
	Wi-Fi + Blu Some: 11ac wirele		1 combo adapter		Nocc-∆C 2165			Cyberlink PowerDVD Create (DVD - DW)									
			ard, inter Duar E 1 combo adapter		51535-AC 3103,		Cardina a const	(DVD±RW)									
	Some: 11ac wirele	ess, M.2 C	Card, Intel Dual E	and Wire	eless-AC 8265,		Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,									
			1 combo adapter		Noce AC 9965			TUV low noise verified (on some models)									
	Some: 11ac wirele Wi-Fi + Blu	ະວຣ, เงเ.∠ ເ uetooth 4∵	zaru, iritei Dual E 1 combo adaptei	and wife . Intel vP	eiess-AC 8265, ro technology su	oport. 2x2	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com									
Bluetooth™	Some: Bluetooth																





















ThinkCentre M920 Tower Platform Specifications

Пиологом	Intel® Coloron® Intel	Dantium®	or Oth /Oth Con	Intal Car	10TM :0 / :E / :7 / :0	Drasassar		LICER 1 Time C. Con 0 / Display Port) via PCIa v4 (available on 00/00/0010)			
Processor	Intel® Celeron®, Intel			intel Col				USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	_	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1			
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2			
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1			
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),			
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Intel vPro technology support, 2x2			
	Pentium Gold G5600 Pentium Gold G5420	2/4	3.9G 3.8G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630 UHD 610	Bluetooth™	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter			
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4			
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Linemet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)			
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);			
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	, manageasy	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi			
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Caarreiter alain	adapter to enable vPro function through wireless connection)			
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified			
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (in rear for optional Power-on password Administrator password			
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		 Kensington® MicroSaver® cable) Padlock loop Administrator password Hard disk password 			
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control			
	Core i3-9320 Core i5-9400	6/6	3.7G / 4.4G 2.9G / 4.1G	8 MB 9 MB	DDR4-2400 DDR4-2666	UHD 630 UHD 630		both keyboard and mouse • Boot without keyboard and mouse			
	Core i5-9400 Core i5-9500	6/6	2.9G / 4.1G 3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/ 			
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices			
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black			
Momory	64GB max, DDR4-2666*, four 288-pin DIMM sockets, dual-channel capable * System automatically clocks down for the processors with lower memory controll							Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
Memory							r Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black			
Storage	Some: Hard Drive / S	,				.,		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
Ciorago	Some: Solid State D	rive (SSD) / SATA 6.0Gb/s	s, 2.5"	or 7200 ipin			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	Some: M.2 SSD (22-	42 / 2280) / PCIe NVMe, F	Cle 3.0	x2 or PCle 3.0 x	4		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
Optical	Some: Intel Optane [™] Optional DVD-ROM of						Mechanical	Tower (18L), black color, metal case (MAD-II)			
Onboard SATA	Four onboard SATA 6							 (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm Approx. 15.45 lb (7 kg), weight may vary by configuration 			
	available via special b	bid model		• • • • • • • • • • • • • • • • • • • •	` '	,		Toolless cover, disk, optical, extension card removal			
Media reader	Optional 7-in-1 media							Optional carry handle, dust filter			
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main n	nemory, DirectX®	12,		Bay 1: Slim external ODD bay Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD			
	one VGA (up to 2048 supports 3 independe							Bay 3: 3.5", 1" high, internal, HDD/SSD			
	Some: NVIDIA Gefor	rce® GT 7	30 (End Of Life)	, DirectX	12, 2GB GDDR	5,		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)			
	PCIe 2.0 x16,	35 watts,	two DisplayPort	(up to 3	340x2160@60Hz	z)		Bay 5: 2.5", internal, HDD/SSD (optional bay)			
	Some: AMD Radeon		irectX 12, 2GB 0 4096x2160@60F		Cie 3.0 x8, 30 v	vatts,		Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)			
	Some: AMD Radeon				85, PCIe 3.0 x8, 5	50 watts,		Slot 1: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16			
	one DisplayPo	ort (up to	3840x2160@60I	Hz), one	HDMI (up to	,		Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1			
			e VGA (up to 20			DDDE		Slot 3: full-length (< 268mm) full-height (< 112mm), PCIe 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension			
	Some: NVIDIA Gefor	120 watts	s 1x DVI-D (up t	o 2560x1	600@60Hz) 1x	HDMI (up		M.2 card slots: Two (one for WLAN, one for SSD/Optane)			
	to 4096x2160	@60Hz),	3x DP (up to 512	20x3200	@60Hz), occupie	es two slots	Power supply	Some: 180 watts, autosensing, 85% PSU			
Monitor Cable	Optional DP to VGA (aongie, טו	ם-ivu dong	e, DP to	dual DP dongle	(for Collage	l ower supply	Some: 250 watts, autosensing, 85% PSU			
	Display with intel inte	grated gra	apnics), or DP to	HDMI 1.	4 dongle			Some: 400 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	oset Intel Q370 Chipset						Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available			
Front ports* (Std.	(Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x USB 3.1 Type-C Gen1 (15W charging),							Some: 1-year or 3-year, limited onsite service / service upgrades available			
Front porte* (Ont	1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)						Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
Rear ports* (Std.	Front ports* (Opt.) Optional: 1x media reader Rear ports* (Std.) 4x USB 3.1 Gen1, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,										
	1x line-out (3.5mm)						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,			
Rear ports* (Opt.	Rear ports* (Opt.) Optional: 2x USB 2.0, 2x USB 3.1 Gen1 via PCle x1, 2x USB 3.1 Type-C Gen2 via PCle x4 (special bid only), 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1,							TUV low noise verified (coming soon, on some models), RoHS-compliant			
							Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
	1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 1x Thunderbolt 3 (combo										

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Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit http://psref.lenovo.com/ for the latest version of Product Specifications Reference.

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U.S. EMEA

Summary of Changes

This section describes the changes made in this version of ThinkStation PSREF and in previous version. This edition might also include minor corrections and editorial changes which are not identified.

December 31, 2019 - Version 553

▶ Add Xeon W-2200 series Processor and DDR4-2933 memory on ThinkStation P520c and P520

December 11, 2019 - Version 552

▶ Add Xeon Gold 6226 and 6244 on ThinkStation P920 and P720

August 7, 2019 - Version 546

► Update processor information on Thinktation P330 Tiny

July 17, 2019 - Version 545

▶ Update EPEAT rating to Silver on most ThinkStation

June 26, 2019 - Version 544

► Add ThinkStation P330 Tower Gen 2/P330 SFF Gen 2 CPU Async update

May 15, 2019 - Version 542

- New ThinkStation P330 Tower Gen 2/P330 SFF Gen 2 announced on April 2019
- ► Update ThinkStation P920/P720/P520 specifications, add Quadro RTX 8000, DDR4-2933, Xeon Scalable Gen 2

March 13, 2019 - Version 539

► Add Intel vPro information on ThinkStation P330 Tower/P330 SFF/P520c/P520/P720/P920

February 20, 2019 - Version 538

- ▶ New ThinkStation P330 Tower models announced on February 2019
- ▶ Update ThinkStation P920/P720/P520/P520c specifications, add Quadro RTX4000/5000/6000

August 22, 2018 - Version 529

- ▶ New ThinkStation P330 Tower/SFF/Tiny models announced on August 2018
- ▶ Update ThinkStation P920/P720 specifications, update flex bay and graphics adapter section

August 1, 2018 - Version 528

- New product ThinkStation P330 Tower/SFF/Tiny announced on July 2018
- ▶ Update ThinkStation P920/P720/P520/P520c, add Refresh 2.0 information
- ▶ Remove all MTM PNs from PDF version

June 20, 2018 - Version 526

- ▶ New ThinkStation P320 Tower models announced on June 2018
- ▶ Update ThinkStation P720 and P920 models, remove EOL models for US
- ▶ Update Windows 10 Pro 64 for Workstations for some ThinkStation P720/P920 models

May 30, 2018 - Version 525

► Added ThinkStation P720/P920 EMEA May 2018 models

April 18, 2018 - Version 523

► New ThinkStation P320 Tower/ P320 SFF/P520c/P520/P720/P920 models announced on April 2018

March 28, 2018 - Version 522

▶ New ThinkStation P320 Tower/ P320 SFF/P520c/P520/P920 announced on March 2018

March 7, 2018 - Version 521

► New ThinkStation P320 Tower/ P320 SFF/P720/P920 announced on February 2018

January 30, 2018 - Version 519

- ▶ New ThinkStation P520c and P520 announced on January 2018
- ▶ New ThinkStation P320 Tower/P320 SFF announced on January 2018

December 20, 2017 - Version 517

- ▶ New ThinkStation P920 models announced on December 2017
- ► Add Optional Ports on ThinkStation P320 Tiny

September 29, 2017 - Version 513

- New ThinkStation P920 and P720 announced on September 2017
- ▶ New ThinkStation P320 Tower/P320 SFF/P410/P510/P710/P910 announced on September 2017

September 12, 2017 - Version 512

▶ New ThinkStation P320 Tower and P320 SFF models announced on August 2017

August 23, 2017 - Version 511

▶ New ThinkStation P320 Tiny models announced on August 2017

August 2, 2017 - Version 510

▶ New ThinkStation P320 Tiny/P320 Tower/ P320 SFF/P410/P510 models announced on July 2017

June 21, 2017 - Version 508

► New ThinkStation P320 Tiny announced on June 2017

May 26, 2017 - Version 507

Add ThinkStation P410/P510/P710/P910 Refresh 3.0 Wave 1 models and update platform specifications

April 19, 2017 - Version 505

- ► New ThinkStation P320 Tower announced on April 2017
- ► New ThinkStation P320 SFF announced on April 2017

March 29, 2017 - Version 504

- ► Added ThinkStation P310 Tower and SFF models announced on March 2017
- ► Added ThinkStation P410 models announced on March 2017

January 25, 2017 - Version 501

▶ Update quantity of PCIe SSD adapter in ThinkStation P510/P910

January 4, 2017 - Version 500

► Added ThinkStation P310 models announced on December 2016

December 14. 2016 - Version 499

- ► Added ThinkStation P410/P510/P710/P910 EMEA models
- ► Added 1TB M.2 PCIe SSD, Quadro P5000, Quadro P6000 support on ThinkStation P510/P710/P910
- ► Added Quadro P5000 support on ThinkStation P410
- ► Added 6TB 7.2K SATA6Gbs HDD support on ThinkStation P410/P510/P710/P910
- ► Added ThinkStation P410/P510/P710/P910 models announced on December 2016

November 23, 2016 - Version 498

- ▶ Removed ThinkStation P500/P900 due to EOL
- ► Added ThinkStation P310 Tower and SFF models announced on November 2016

October 12, 2016 - Version 496

- ► Removed flash option on ThinkStation P510/P710/P910
- ► Added ThinkStation P310/P410/P510/P710/P910 models announced on September 2016

August 3, 2016 - Version 493

- ▶ Removed ThinkStation P500/P700/P900 Windows 7 DG from Win8.1 U.S. models
- ► Added keyboard and mouse features on all ThinkStation

July 13, 2016 - Version 492

- ▶ Added ThinkStation P500, P700, and P900 Windows 10 downgrade to Windows 7 models
- ► Updated Maximum configuration weight of ThinkStation P410
- ► Added ThinkStation P710 and P910 models announced on on July 2016
- ► Added "Maximum drives in 3.5" bay" feature on ThinkStation P500/P510/P700/P710/P900/P910

June 22, 2016 - Version 491

- ► Added new product ThinkStation P410/P510
- ► Added NVIDIA Quadro M2000 on ThinkStation P310 Tower
- ► Added keyboard and mouse information on ThinkStation P710/P910
- ► Added internal USB information on ThinkStation P710/P910

June 2, 2016 - Version 490

- ► Added ThinkStation P710/P910 US models
- ▶ Updated ThinkStation P710/P910 processor information

May 19, 2016 - Version 489

- ► Added NVIDIA Quadro M2000 on compatible product
- ► Updated maximum weight on ThinkStation P710
- ► Removed 30AT000BUS

April 27, 2016 - Version 488

- ► Added ThinkStation P710 and P910 models for EMEA, announced on April 2016
- ► Updated Energy star information on ThinkStation P500/P700/P710/P900/P910

April 6, 2016 - Version 487

► New ThinkStation P710 and P910, announced April 5, 2016 (specification only)

March 23, 2016 - Version 486

► Added processors specifications for P310/P500/P700/P900

February 24, 2016 - Version 485

- ▶ Added ThinkStation P310 and P700 models for US, announced on February 2016
- ► Added ThinkStation P700 and P900 models for EMEA, announced on February 2016

December 9. 2015 - Version 482

▶ New ThinkStation P310 Tower and SFF, announced November 24, 2015

November 18, 2015 - Version 481

- ► Combines ThinkStation PSREF United States version and Western Europe version.
- ► Extends the supported GEO into Europe, Middle East and Africa.
- ► Covers all TopSeller and Relationship models for US and all focus models for EMEA









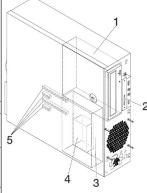




ThinkStation P320 SFF Platform Specifications								
Components	Specification							
Chipset	Intel C236 Chipset							

Components	Specification								
Chipset	Intel C236 Chipset								
Intel AMT	Intel Active Manage Intel Standard Man								
	One Intel "Kabylake"	e" or "	Skylake"	processor	as listed:				
	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6	4C 4C	/3.8GHz/8 /3.8GHz/8	MB/72W/D MB/73W/D MB/72W/D	DR4-2400 DR4-2400				
	Xeon E3-1245 v6 Xeon E3-1240 v6 Xeon E3-1230 v6 Xeon E3-1225 v6 Xeon E3-1220 v6	4C	:/3.7GHz/8 :/3.5GHz/8	MB/73W/D MB/72W/D MB/72W/D MB/73W/D B/72W/DD/	DR4-2400 DR4-2400				
Processor	Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7400	4C 4C 4C	6/3.6GHz/6 6/3.5GHz/6 6/3.4GHz/6 6/3GHz/6M	MB/65W/D MB/65W/D MB/65W/DDI	DR4-2400 DR4-2400 DR4-2400 R4-2400				
. 1000000	Core i3-7300 Core i3-7100 "Skylake"	20	//4GHZ/4M //3.9GHz/3	B/51W/DDI MB/51W/D	H4-2400 DR4-2400				
	Xeon E3-1275 v5			MB/80W/D					
	Xeon E3-1245 v5 Xeon E3-1240 v5 Xeon E3-1230 v5 Xeon E3-1225 v5	4C	:/3.5GHz/8 :/3.4GHz/8	MB/80W/D MB/80W/D MB/80W/D MB/80W/D	DR4-2133 DR4-2133				
	Xeon E3-1225 v5 Xeon E3-1220 v5 Core i7-6700 Core i5-6500	4C 4C	:/3GHz/8M :/3.4GHz/8	B/80W/DDI MB/65W/D	R4-2133 DR4-2133				
	Core i5-6500 4C/3.2GHz/6MB/65W/DDR4-2133 Core i5-6400 4C/2.7GHz/6MB/65W/DDR4-2133 Core i3-6100 2C/3.7GHz/3MB/51W/DDR4-2133								
Memory DIMM slots					controller in processor)				
Memory type/capacity	Up to 64GB ECC/non-ECC (4 x 16GB), DDR4-2400. UDIMM. "Skylake" processor supports up to DDR4-2133. Core i7 and i5 processors cannot support ECC.								
Intel HD Graphics in processor	Integrated Intel HD P530 in Xeon E3-12x5 v5 processors, or Intel HD P630 in Xeon E3-12x5 v6 processors, or Intel HD 530 in Core i7, i5, or i3 6000 processors. or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear.								
	Two PCI Express 3.0 x16 slots for graphics adapters. Up to two NVIDIA Quadro P1000. Supports the following NVIDIA graphic adapters:								
	Adapter NVS 310	Cores 48	Memory 1GB	Power 19.5W	Connector 2xDP				
Discrete graphics	NVS 315	48	1GB	19.5W	2xDVI-I SL/2xDP				
0 1	NVS 510	192	2GB	33.4W	4xmini DP				
	Quadro P400	256	2GB	30W	3xminiDP				
	Quadro P600	384	2GB	40W	4xminiDP				
	Quadro P1000	640	4GB	47W	4xminiDP				
Onboard drive controller	Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support * RAID 5 needs three 2.5" SSD drives.								
Drive Bays	M.2 NVMe SSD	tical +	2 x 3.5" c	lisk drive l	pays + 1 x 2.5" disk drive l	oay + two			
Supporting disk drives	3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle adapter 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up to 2; or 16GB Intel Optane Memory, PCle 3.0 x2								
Max internal storage	10TB (2 x 4TB 3.5'	HDDs	s + 1 x 2T	B 2.5" SS	D) plus two 1TB M.2 NVN	/le SSD			
Media reader	-				· ·				
Power supply	9-in-1 card reader. Optional 29-in-1 card reader on selected models One 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified. Or one 210 watts with variable speed fan, autosensing,								
					JS Platinum qualified				
Onboard Ethernet	One onboard gigat	oit ethe	rnet, Inte	l I219LM,	supports Wake-on-LAN				

Components	Specification					
HD Audio	Realtek ALC662 codec					
TPM	Standard, TCG 2.0-compliant					
Front ports	rts Two USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm)					
Rear ports	1 VGA and 2 DisplayPort (for Intel HD Graphics models only), two USB 2.0, four USB 3.1 Gen 1, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)					
Mechanical	 Raven black color; metal case 4.02"W x 15.53"D x 13.31"H 102mm W x 394.5mm D x 338mm H 17.2 lb (7.9kg) max configuration 12.9-liter 					
Environmental certifications	GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ ENERGY STAR 6.1 qualified					
Limited warranty	1 or 3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units.					
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/					



Drive Bays and PCIe Slots

Bay 1	5.25", supports one of the following: HH optical/flex module***/9mm optical+3.5" HDD bay/ 3.5" HDD bay/Front Access Storage Enclosure ****Flex module supports one or more of the following: 9mm optical/ 29-in-1 reader/front IEEE 1394/front eSATA. Up to one flex module is supported per system.
Bay 2	Optional 9-in-1 single slot reader
Bay 3	Standard 3.5" HDD bay
Bay 4	Optional 2.5" HDD bay (under Bay 3)
5 -Slots	Four PCIe slots (top-down): Slot 1: Low Profile, PCIe 3.0 x16 (near CPU) Slot 2: Low Profile, PCIe 3.0 x1 Slot 3: Low Profile, PCIe 3.0 x16 (x4 elec) Slot 4: Low Profile, PCIe 3.0 x1





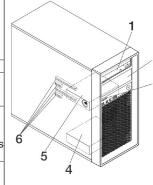






ThinkStation P32	20 Tower Platf	orm	Specif	icatior	าร				
Components	Specification								
Chipset	Intel C236 Chipset								
Intel AMT	Intel Active Manage Intel Standard Man	ageab	ility on ot	her mode	ls				
	One Intel "Kaby Lake" or "Skylake" processor as listed: "Kaby Lake"								
Processor	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6 Xeon E3-1245 v6 Xeon E3-1240 v6 Xeon E3-1230 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Core i7-7700K Core i5-7600 Core i5-7600 Core i3-7400 Core i3-7400 Core i3-7400 Core i3-7400	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 2C	4C/3.9GHz/8MB/72W/DDR4-2400 4C/3.8GHz/8MB/73W/DDR4-2400 4C/3.8GHz/8MB/73W/DDR4-2400 4C/3.7GHz/8MB/72W/DDR4-2400 4C/3.7GHz/8MB/72W/DDR4-2400 4C/3.5GHz/8MB/72W/DDR4-2400 4C/3.3GHz/8MB/72W/DDR4-2400 4C/3.3GHz/8MB/73W/DDR4-2400 4C/3.5GHz/8MB/91W/DDR4-2400 4C/3.5GHz/6MB/65W/DDR4-2400 4C/3.5GHz/6MB/65W/DDR4-2400 4C/3.5GHz/6MB/65W/DDR4-2400 4C/3.5GHz/6MB/65W/DDR4-2400 4C/3.5GHz/6MB/65W/DDR4-2400 4C/3.4GHz/6MB/65W/DDR4-2400 4C/3.4GHz/4MB/51W/DDR4-2400 2C/4GHz/4MB/51W/DDR4-2400 2C/4GHz/4MB/51W/DDR4-2400						
	"Skylake"								
	Xeon E3-1275 v5 Xeon E3-1245 v5 Xeon E3-1240 v5 Xeon E3-1230 v5 Xeon E3-1225 v5 Xeon E3-1220 v5 Core i7-6700 Core i5-6500 Core i3-6400 Core i3-6100	4C 4C 4C 4C 4C 4C	4C/3.6GHz/8MB/80W/DDR4-2133 4C/3.5GHz/8MB/80W/DDR4-2133 4C/3.5GHz/8MB/80W/DDR4-2133 4C/3.4GHz/8MB/80W/DDR4-2133 4C/3.3GHz/8MB/80W/DDR4-2133 4C/3.4GHz/8MB/80W/DDR4-2133 4C/3.4GHz/8MB/65W/DDR4-2133 4C/3.2GHz/6MB/65W/DDR4-2133 4C/2.7GHz/6MB/65W/DDR4-2133 2C/3.7GHz/3MB/51W/DDR4-2133						
Memory DIMM slots	4 DIMM slots, 2-channel (integrated memory controller in processor)								
Memory type/capacity	Up to 64GB ECC/non-ECC (4 x 16GB), DDR4-2400. UDIMM. "Skylake" processor supports up to DDR4-2133. Core i7 and i5 processors cannot support ECC.								
Intel HD Graphics in processor	Integrated Intel HD P530 in Xeon E3-12x5 v5 processors, or Intel HD P630 in Xeon E3-12x5 v6 processors, or Intel HD 530 in Core i7, i5, or i3 6000 processors. or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear.								
	Two PCI Express 3.0 x16 slots for graphics adapters. Up to two Quadro P1000 on 250 watts models. Or up to two Quadro P2000, or up to one Quadro P4000 on 400 watts models. Supports the following NVIDIA graphics adapters:								
	Adapter	Cores	Memory	Power	Connector				
	NVS 310	48	1GB	19.5W	2xDP	-			
Discrete graphics	NVS 315 NVS 510	48 192	1GB 2GB	19.5W 33.4W	2xDVI-I SL/2xDP 4xmini DP	-			
	NVS 810	1024	4GB	68W	8xmini DP	1			
	Quadro P400	256	2GB	30W	3xminiDP	1			
	Quadro P600	384	2GB	40W	4xminiDP				
	Quadro P1000	640	4GB	47W	4xminiDP	_			
	Quadro P2000	1024	5GB	75W	4xDP	4			
<u> </u>	Quadro P4000	1792	8GB	105W	4xDP				
Onboard drive controller	SATA connector for	option	nal eSAT/	A. RAID 0,	optical and disk drives plu , 1, 5, 10 support	is one			
Drive Bays	Two external 5.25" Up to one 9mm op	bays, tical pl	two interr us 4 x 3.5	nal 3.5" ba 5" disk driv	ays (see right). ve bays plus two M.2 NVI	Me SSD			
Supporting disk drives	2.5" SATA SSD (6Gbs)	M.2 NVMe SSD, via PCIe 256GB Opal/512GB Opal/1TB Opal, PCIe 3.0 x4, up to 2; or							
Max internal storage	16TB (4 x 4TB 3.5	' HDDs	s) plus 2T	B (2 x 1T	B) M.2 NVMe SSD				
Media reader					ider on selected models				
	o in a dara roddor.	Spuoi	111	. 54.4 154	011 00100100 11100010				

Components	Specification
Power supply	One 250 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified. Or one 400 watts with variable speed fan, autosensing, Climate Savers Computing Platinum, 80 PLUS Platinum qualified.
Onboard Ethernet	One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN
HD Audio	Realtek ALC662 codec
TPM	Standard, TCG 2.0-compliant
Front ports	Two USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm)
Rear ports	1 VGA and 2 DisplayPort (for Intel HD Graphics models only), two USB 2.0, four USB 3.1 Gen 1, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Mechanical	Raven black color; metal case 6.89"W x 16.77"D x 14.8"H 175mm W x 426mm D x 376mm H 28.66 lb (13kg) max configuration 25-liter
Environmental certifications	GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ ENERGY STAR 6.1 qualified
Limited warranty	1 or 3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units.
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/



Drive Bays and PCle Slots

		•
2	Bay 1 and Bay 2	5.25", support one of the following: HH optical/flex module/9mm optical+3.5" HDD bay/ 3.5" HDD bay/Front Access Storage Enclosure (FASE) Note: 1. Flex module supports one or more of the following: 9mm optical/ 29-in-1 reader/front IEEE 1394/front eSATA. 2. Up to one flex module/FASE per system.
3	Bay 3	Optional 9-in-1 single slot reader
	Bay 4	Standard 3.5" HDD bay
	Bay 5	Standard 3.5" HDD bay
	6 -Slots	Four PCle slots (top-down): Slot 1: Half length, full height, PCle 3.0 x16 (near CPU) Slot 2: Half length, full height, PCle 3.0 x1 Slot 3: Half length, full height, PCle 3.0 x16 (x4 elec) Slot 4: Half length, full height, PCle 3.0 x16 (x4 elec) Slot 4: Half length, full height, PCle 3.0 x1 Note: 1. Both discrete graphics adapter and M.2 NVMe SSD should be installed on slot 1 or slot 3, the maximum quantity of discrete graphics adapter and M.2 NVMe SSD is 2. 2. When two discrete graphics adapters are used, no other PCle card can be used.











ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

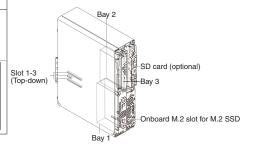
Components	Specification				-				
Form factor	8.4L mini-tower								
Dimensions	Height: 343.5 mm (12 5 in\ \//id	th. 02	5 mm	/2 6 in	Donth:	205 6 mm	(12 in)	
					1 (3.0 111	, Бериі.	303.0 111111	(12111)	
Weight	Maximum configuration: 13.23 lb (6.0kg) Supports one of the following processor:								
	• • •								
	Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 (260W PSU need Xeon E-2276G 6C/12T/3.8GHz/12MB/80W/DDR4-2666							U needed)	
	Xeon E-2276G						i		
	Xeon E-2274G	4C/8T/4.00							
	Xeon E-2246G	6C/12T/3.6)		
	Xeon E-2244G Xeon E-2236	4C/8T/3.80 6C/12T/3.4							
	Xeon E-2234	4C/8T/3.60					,		
	Xeon E-2226G	6C/6T/3.40							
	Xeon E-2224G	4C/4T/3.50			-				
	Xeon E-2224	4C/4T/3.40							
Processor	Xeon E-2174G	4C/8T/3.8C							
1 10063301	Core i9-9900	8C/16T/3.1	GHz/	16MB/	65W/DE	R4-2666	5		
	Core i7-9700	8C/8T/3.00	3Hz/12	2MB/6	5W/DDF	R4-2666			
	Core i7-8700	6C/12T/3.2	GHz/	12MB/	65W/DE	R4-2666	3		
	Core i5-9600	6C/6T/3.10							
	Core i5-9500	6C/6T/3.00							
	Core i5-9400	6C/6T/2.9C							
	Core i5-8500	6C/6T/3.00							
	Core i3-9300	4C/4T/3.70							
	Core i3-9100 Core i3-8300	4C/4T/3.60 4C/4T/3.70							
	Core i3-8100	4C/4T/3.7C							
	Pentium Gold G5620								
Chipset	Intel C246 Chipset	20/+1/+.00	AI 12/ TI	VID/OT	VV/DDIT	7 2 700	-		
Memory Sockets	4 DIMM sockets with	2 channels							
,	8GB/16GB DDR4-2666 UDIMM ECC or								
Memory Types	4GB/8GB/16GB/32G				n-ECC				
Memory Capacity	64GB with 4 x 16GB	for UDIMM E	CC or	128G	B with 4	x 32GB	UDIMM noi	n-ECC	
Memory Protection	ECC on models with	UDIMM ECC	mem	eory					
,	Three PCIe 3.0 slots as following:								
				to CP	П				
Expansion slots	Slot 1 PCIe 3.0 x16, low profile, links to CPU								
	Slot 2 PCIe 3.0 x1, low profile, links to PCH								
	Slot 3 PCIe 3.0 x16 (negotiable link width x4), low profile, links to PCH								
	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD Graphics 630 in Corn i5 or i3 processors								
Processor graphics	Graphics 630 in Core i5 or i3 processors.								
	Works along with discrete graphics to support multi-display, enables three rear display connectors (2 DP standard, 1 DP or HDMI optional)								
	Up to two PCIe 3.0							3) Supports	
	the following graphi	cs adapters:	uiscit	cic gi	aprilos c	ισαρισι (Olot I alla	o). Oupports	
Discrete graphics	3 3 1	ores Memo	rv I	Power	Con	nectors	Max qty		
card		56 2GB GDI		30W		niniDP	2		
		12 2GB GDI		40W		niniDP	2		
		40 4GB GDI		47W		niniDP	2		
	Storage Controller			Inter	rface	Disl	к Туре	RAID	
Storage Controller	Onboard Intel RST S	SATA RAID	Std	SATA	6Gb/s	HDD	or SSD	0/1	
Storage Controller	Onboard Intel RST F				NVMe		Cle SSD	0/1	
	Notes: M.2 SSD support is	s limited, please	see Sto	rage ba	y section	for more inf	ormation		
		nterface RPI	_		Offerina			v Otv	
		TA 6Gb/s 7.2			3/2TB/41	TB.	ivia	x Qty 1	
		TA 6Gb/s 7.2			OGB FIP			2	
Storage Support		TA 6Gb/s			3/512GE			2	
		le NVMe			32GB		1, used wi	th HDD/SSD	
		le NVMe	1	256GE	3/512GE	/1TB		3	

	Components	Specification		
		Up to 3 bays with two disk bays and one slim optical bay:		
		Bay 1 Primary 3.5" SATA bay		
	Storage bay	Bay 2 2.5" SATA bay (Optional)		
		Bay 3 9mm Slim ODD bay		
		M.2 3x M.2 SSD (1 onboard. 2 via PCle to M.2 adapter) Notes: Support 1x M.2 SSD at present, 3x M.2 SSD support is pending availability		
	M.2 slot for Wi-Fi and Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps		
	Media reader	Optional SD card reader on most models		
	Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional PCIe ethernet adapters are available		
	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, cable lock, Kensington lock, and pad lock		
	Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed		
	Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models		
	Base warranty	US models comes with 3-year limited onsite service with 9x5/NBD. 1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs		
	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec		
Front ports 2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen Type-C. 1x Mic-in. 1x Combo jack				
	Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor		
	Optional rear ports	Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor		
	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)		
	Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)		
\parallel	Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing		
	Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified		
	Power supply	Supports one 210W or 260W power supply. 210W is 100V - 240V, 85% PSU, Climate Savers Computing Bronze and 80 PLUS Bronze qualified. 260W is 100V - 240V, 92% PSU, Climate Savers Computing Platinum and 80 PLUS Platinum qualified		
	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/		
	Note:			

Note:

1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.

2. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer















ThinkStation P330 Tiny Platform Specifications - I of II

Components	Specification							Components	Specification		
Form factor	1L. Optional VESA mount bracket kit, supports VESA 75mm and 100mm.Optional floor stand for vertical orientation.Optional tool-less chassis open.Optional dust filter							Expansion slots	One PCle slot via specific riser card: PCle 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card; PCle 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter		
Dimensions	Height: 179 mm	(7.0 ir	n). Width	: 36.5 mm (1.437 in). D	epth: 182.9 r	nm (7.2 in)		65W or 62W processor models supports processor graphics only.		
Weight	Maximum config	guratio	n: 3.08 lk	(1.4kg)				Graphics	35W processor models come with processor graphics plus a discrete graphics		
Recommended monitors	Lenovo recommends ThinkVision P series monitors for best display performance and productivity							Graphics - Processor			
	Supports one of the following:							graphics	Support multi-display One of the following discrete graphics cards on 35W processor models:		
	Processor Number	Cores	Threads	Base Frequency	Cache TDP	Memory Types	Processor Graphics	Graphics - Discrete	Adapter Cores Memory Pow- Connectors		
	Core i9-9900T	8	16	2.1GHz	16MB 35W	DDR4-2666	Intel UHD Graphics 630		Quadro P620 512 2GB GDDR5 40W 4x miniDP		
	Core i7-9700T	8	8	2.0GHz	12MB 35W	DDR4-2666	Graphics 630	Storage controllers	Quadro P1000 640 4GB GDDR5 47W 4x miniDP Integrated Intel SATA AHCI controller in chipset, 6Gbps SATA, one onboard		
	Core i5-9600T	6	6	2.3GHz	9MB 35W	DDR4-2666	Graphics 630	Storage controllers Internal storage bay	SATĂ port for 2.5" HDD Up to one 2.5" HDD on models without discrete graphics card		
	Core i5-9600	6	6	3.1GHz	9MB 65W	DDR4-2666	Intel UHD Graphics 630	Disks	2.5" HDD supports up to 1TB, 6Gbps SATA, 7.2K or 5.4K		
	Core i5-9500T	6	6	2.2GHz	9MB 35W	DDR4-2666		M.2 slot for SSD	Two onboard M.2 slots for M.2 SSD, one for M.2 2280 SSD, one for M.2 2280 or 2242 SSD		
	Core i5-9500	6	6	3.0GHz	9MB 65W	DDR4-2666	Graphics 650	M.2 SSD	M.2 2280 SSD supports up to 1TB each, PCle 3.0 x4, NVMe, optional Opal. M.2 2242 SSD supports up to 128GB, PCle 3.0 x2, NVMe		
	Core i5-9400T	6	6	1.8GHz	9MB 35W	DDR4-2666	Graphics 630	Optane memory	Up to one 16GB Optane memory per system. Optane memory must work with a 2.5" HDD		
	Core i5-9400	6	6	2.9GHz	9MB 65W	DDR4-2666	Intel UHD Graphics 630		One dedicated M.2 2230 slot for optional Wi-Fi card, supports one of the		
	Core i3-9320	4	4	3.7GHz	8MB 62W	DDR4-2400	Intal LIUD	M.2 slot for Wi-Fi and Bluetooth	following: Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac,		
	Core i3-9300T	4	4	3.2GHz	8MB 35W	DDR4-2400	Graphics 630		Bluetooth 5, up to 1.73Gbps. Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to		
	Core i3-9300	4	4	3.7GHz	8MB 62W	DDR4-2400	Intel UHD Graphics 630		867Mbps. Note: Wi-Fi card, or specific functions of Wi-Fi- card may not be supported in some countries		
Processor	Core i3-9100T	4	4	3.1GHz	6MB 35W	DDR4-2400	Intal LIHD	Wi-Fi antenna	Optional Tiny 2.4GHz/5GHz SMA antenna kit Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW.		
	Core i3-9100	4	4	3.6GHz	6MB 65W	DDR4-2400	Intel UHD Graphics 630	Optical Madia reader	VESA mount is required		
	Core i7-8700T	6	12	2.4GHz	12MB 35W	DDR4-2666	Intel UHD Graphics 630	Media reader	None. Using USB adapter One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports		
	Core i7-8700	6	12	3.2GHz	12MB 65W	DDR4-2666	Intal LIHD	Network interfaces	Wake-on-LAN. Optional Intel i350-T4 for 4x GbE ports, using PCIe slot		
	Core i5-8600T	6	6	2.3GHz	9MB 35W	DDR4-2666	Intal LIHD	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Chassis intrusion switch. Optional Kensington lock		
	Core i5-8600	6	6	3.1GHz	9MB 65W	DDR4-2666	Graphics 630	Intel vPro Technology	Supports vPro on models with the following processors: Core i7-8700T, Core i7-8700, Core i5-8600T, Core i5-8600, Core i5-8500T, Core i5-8500. vPro also requires Wireless-AC 9560 if Wi-Fi is needed		
	Core i5-8500T	6	6	2.1GHz	9MB 35W	DDR4-2666	Graphics 630	Systems management	Intel Active Management Technology 12 on vPro models, Intel Standard Manageability on other models		
	Core i5-8500	6	6	3.0GHz	9MB 65W	DDR4-2666	Intel UHD Graphics 630		US models comes with 3-year limited onsite service with 9x5/NBD.		
	Core i5-8400T	6	6	1.7GHz	9MB 35W	DDR4-2666	Intal LIHD	Base warranty	1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs		
	Core i5-8400	6	6	2.8GHz	9MB 65W	DDR4-2666	Intel UHD Graphics 630	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec 1x USB 3.1 Gen 1 Type A (charging). 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x		
	Core i3-8300T	4	4	3.2GHz	8MB 35W	DDR4-2400		Front standard ports	Combo jack 2x USB 3.1 Gen 2 Type A. 2x USB 3.1 Gen 1 Type-A. 1x RJ-45. 1x DP.		
	Core i3-8300	4	4	3.7GHz	8MB 62W	DDR4-2400	Intel UHD Graphics 630	Rear standard ports	1x HDMI Up to two optional rear ports via punch out cable.		
	Core i3-8100T	4	4	3.1GHz	6MB 35W	DDR4-2400	Graphics 630		Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DP function.		
	Core i3-8100	4	4	3.6GHz	6MB 65W	DDR4-2400	Intel UHD Graphics 630	Optional rear ports - via punch out cable	1x COM. 1x VGA.		
Chipset	Intel Q370 Chip				=				1x DP.		
Memory	2 DIMM sockets		4-2666.	SoDIMM. N	on-ECC				1x HDMI. Port 2 supports one COM		
Memory Capacity	64GB (2x 32GE	3)]	FULL SUPPOILS VITE OUTVI		

ThinkStation P330 Tiny Platform Specifications - II of II

Components	Specification
Optional rear ports - via PCIe adapter	Supports one of the following: 4x miniDP with Quadro P620 or P1000, 35W processor models only 2x USB 3.1 Gen 1. 4x RJ-45 GbE with Intel I350-T4. 4x COM Note: Punch out cable and PCIe adapter are mutually exclusive
Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)
Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)
Humidity	Operating: 20%~80%, non-condensing Storage (with package): 20%~90%, non-condensing
MIL-SPEC	Certified
Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified
Power supply	Supports one 135W power adaper, 100V - 240V, 88% PSU
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/













ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - I of II

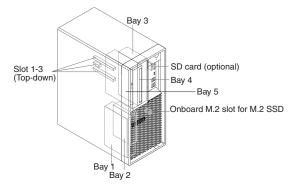
Note: 2x Quadro P2000, Quadro P4000, Quadro P5000, or Quadro RTX 4000 needs 400W PSU

Components	Specification	Components	ents Specification				
Form factor	18L Tower		Storage Controller Type Interface Disk Type RAID				
Dimensions	Height: 376 mm (14.8 in). Width: 165 mm (6.5 in). Depth: 328 mm (12.9 in)	Storage Controller	Onboard Intel RST SATA RAID Std SATA 6Gb/s HDD or SSD 0/1/10/5				
Weight	Maximum configuration: 28.22 lb (12.8kg)	1	Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1				
Wogin	Supports one of the following processors:	-	Disk Type Interface RPM Offering Max Qty				
			3.5" SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB 3				
	Xeon E-2286G 6C/12T/4.0GHz/12MB/95W/DDR4-2666 400W PSU needed Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 400W PSU needed	Storage Support	2.5" SATA HDD SATA 6Gb/s 7.2K 500GB FIPS 4				
	Xeon E-2276G 8C/161/3.4GHz/16MB/80W/DDR4-2666 400W PSO needed Xeon E-2276G 6C/12T/3.8GHz/12MB/80W/DDR4-2666		2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB 4				
	Xeon E-2274G 4C/8T/4.0GHz/8MB/83W/DDR4-2666		Optane Memory PCIe NVMe 32GB 1,				
	Xeon E-2246G 6C/12T/3.6GHz/12MB/80W/DDR4-2666		M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB 3				
	Xeon E-2244G 4C/8T/3.8GHz/8MB/71W/DDR4-2666						
	Xeon E-2236 6C/12T/3.4GHz/12MB/80W/DDR4-2666		Up to five bays with four disk bays plus one slim optical bay, supports up to 3x				
	Xeon E-2234 4C/8T/3.6GHz/8MB/71W/DDR4-2666		3.5" HDD plus 1x 2.5" SSD, or 4x 2.5" HDD/SSD				
	Xeon E-2226G 6C/6T/3.4GHz/12MB/80W/DDR4-2666		Bay 1 Primary disk bay, 3.5" or 2.5"				
	Xeon E-2224G 4C/4T/3.5GHz/8MB/71W/DDR4-2666		Bay 2 2.5" SATA bay, cannot be available when 2nd Quadro P2000 is used				
	Xeon E-2224 4C/4T/3.4GHz/8MB/71W/DDR4-2666	Storage Bays	Bay 3 Secondary disk bay, 3.5" or 2.5"				
	Xeon E-2186G 6C/12T/3.8GHz/12MB/95W/DDR4-2666 400W PSU needed Xeon E-2174G 4C/8T/3.8GHz/8MB/71W/DDR4-2666		Bay 4 5.25" Flex bay, supports one of the following:				
Processor	Core i9-9900K 8C/16T/3.6GHz/16MB/95W/DDR4-2666 400W PSU needed		Flex module for optional front eSATA/Thunderbolt/IEEE1394				
	Core i9-9900 8C/16T/3.1GHz/16MB/65W/DDR4-2666		3rd disk bay, 3.5" or 2.5", removable, via Front Access Storage				
	Core i7-9700K 8C/8T/3.6GHz/12MB/95W/DDR4-2666 400W PSU needed		Enclosure, using SATA 4 connector as eSATA mode				
	Core i7-9700 8C/8T/3.0GHz/12MB/65W/DDR4-2666		 3rd disk bay, 3.5" or 2.5", via 5.25" to 3.5" HDD Kit 				
	Core i7-8700 6C/12T/3.2GHz/12MB/65W/DDR4-2666		Bay 5 9mm Slim ODD bay				
	Core i5-9600K 6C/6T/3.7GHz/9MB/95W/DDR4-2666 400W PSU needed		M.2 3x M.2 SSD (1 onboard. 2 via PCIe to M.2 adapter)				
	Core i5-9600 6C/6T/3.1GHz/9MB/65W/DDR4-2666	Media reader	Optional SD card reader on most models				
	Core i5-9500 6C/6T/3.0GHz/9MB/65W/DDR4-2666	Network	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports				
	Core i5-9400 6C/6T/2.9GHz/9MB/65W/DDR4-2666 Core i5-8500 6C/6T/3.0GHz/9MB/65W/DDR4-2666	interfaces	Wake-on-LAN. Optional PCIe ethernet adapters are available				
	Core i5-8500 6C/6T/3.0GHz/9MB/65W/DDR4-2666 Core i3-9300 4C/4T/3.7GHz/8MB/62W/DDR4-2400		One dedicated enhant M.O. slat for entianal Intel Wireless AC 0550, 0v0				
	Core i3-9100 4C/4T/3.6GHz/6MB/65W/DDR4-2400	WLAN + Bluetooth	2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps				
	Core i3-8300 4C/4T/3.7GHz/8MB/62W/DDR4-2400		Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant.				
	Core i3-8100 4C/4T/3.6GHz/6MB/65W/DDR4-2400	Security features					
Chipset	Intel C246 Chipset	1	pad lock				
Memory Sockets	4 DIMM sockets with 2 channels	Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed				
	8GB/16GB DDR4-2666 UDIMM ECC or	1	•				
Memory Types	4GB/8GB/16GB/32GB DDR4-2666 UDIMM non-ECC		Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models				
Memory Capacity	64GB with 4 x 16GB for UDIMM ECC or 128GB with 4 x 32GB UDIMM non-ECC		US models comes with 3-year limited onsite service with 9x5/NBD.				
Memory Protection	ECC on models with UDIMM ECC memeory	Base warranty	1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs				
	Three PCle 3.0 slots as following:	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec				
Evennsian alata	Slot 1 PCle 3.0 x16, full height, half length, links to CPU	Crant narta	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1				
Expansion slots	Slot 2 PCle 3.0 x1, full height, full length, links to PCH	Front ports	Type-C. 1x Mic-in. 1x Combo jack				
	Slot 3 PCle 3.0 x16 (negotiable link width x4), full height, half length, links to PCH		2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP.				
	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD	Rear ports Optional front	1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor				
Drococor graphics	Graphics 630 in Core i7, i5, i3, or Pentium processors.		·				
Processor graphics	Graphics 630 in Core i7, i5, i3, or Pentium processors. Works along with discrete graphics to support multi-display, enables three rear	ports (on flex module)	2x Thunderbolt (USB Type-C), one of two ports supports video-out.				
	display connectors (2 DP standard, 1 DP or HDMI optional)		1x eSATA. 1x IEEE1394				
	Up to two PCle 3.0 x16 slots for discrete graphics card (Slot 1 and 3). Supports the	Optional rear ports	Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt.				
	following graphics adapters:						
Discrete Graphics Offering	Graphics Memory Power Connector Max Qty						
	Quadro P400 2GB GDDR5 30W 3x miniDP 2		Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor				
	Quadro P620 2GB GDDR5 40W 4x miniDP 2	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C)				
	Quadro P1000 4GB GDDR5 50W 4x miniDP 2 Quadro P2000 5GB GDDR5 75W 4x DP 2		Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)				
	Quadro P2000 5GB GDDR5 75W 4x DP 2						
	Quadro P4000 8GB GDDR5 105W 4x DP 1						
	Quadro P5000 16GB GDDR5X 180W DVI-D DL + 4x DP 1						
	Quadro RTX 4000 8GB GDDR6 160W 3x DP, 1x VirtualLink 1						

ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - II of II

Components	Specification
Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)
Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing
Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified
Power supply	Supports one 250W or 400W power supply, 100V - 240V, 92% PSU. Climate Savers Computing Platinum and 80 PLUS Platinum qualified. 400W PSU supports one 6+2-pin aux power connector.
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/

Note:
1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.
2. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer





ThinkStation P520 Platform Specifications - I of II

Dimonoiona	33L Tower	400	/10.1" -	. 440	7.0111.45.2	la for all			
Dimensions 165mm/6.5" W x 460mm/18.1" D x 440mm/17.3" H (with feet) Weight Maximum configuration: 52.91 lb (24kg)									
Weight	Maximum config							N 4	
	Processor	# of	# of	Base	Cac	he	TDP		nory
	Voon W 000E		Threads	Frequenc	;y		105\//		oes
	Xeon W-2295	18	36	3.0GHz			165W		1-2933
	Xeon W-2275	14	28	3.3GHz			165W		1-2933
	Xeon W-2265	12	24	3.5GHz			165W		1-2933
	Xeon W-2255	10	20	3.7GHz			165W		1-2933
	Xeon W-2245	8	16	3.9GHz			155W		-2933
	Xeon W-2235	6	12	3.8GHz			130W		1-2933
	Xeon W-2225	4	8	4.1GHz			105W		-2933
Processor Support	Xeon W-2223	4	8	3.6GHz			120W		-2666
	V6011 AA-5 182	18	36	2.3GHz			140W		1-2666
	Xeon W-2175	14	28	2.5GHz			140W	DDR4	-2666
	Xeon W-2155	10	20	3.3GHz	13.75	MB	140W	DDR4	l-2666
	Xeon W-2145	8	16	3.7GHz	11N	1B	140W	DDR4	l-2666
	Xeon W-2135	6	12	3.7GHz	8.25	MB	140W	DDR4	l-2666
	Xeon W-2133	6	12	3.6GHz			140W	DDR4	l-2666
	Xeon W-2125	4	8	4.0GHz			120W		-2666
	Xeon W-2123	4	8	3.6GHz			120W		l-2666
	Xeon W-2104	4	4	3.2GHz	8.251		120W		-2400
	Xeon W-2102	4	4	2.9GHz			120W		-2400
Processor Sockets				2.50112	0.201	טועו	12000	רוטטוו	2700
Chipset	Intel C422 Chips								
Memory Sockets	8 DIMM sockets								
Memory Types	DDR4-2666 RDI	IMM or D	DR4-293	3 RDIMM					
Memory Capacity	512GB with 8 x 6	64GB DI	DR4-2933	RDIMMs					
Memory Protection									
Wichioly 1 Totoblion		DOI: 0.0		- 1 - I - 4 - 6 - II I -					
	Slot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended								
				height, full					
	Slot 2 (CPU)	PCIe 3.0	x16, full	height, full	length, 75\	W, dou	ıble-wid	th	
Expansion slots	Slot 2 (CPU) I Slot 3 (PCH) I	PCIe 3.0 PCIe 3.0	x16, full l x4, full h	height, full eight, half l	length, 75\ ength, 25\	W, dou V, ope	ıble-widi n ended	th I	
Expansion slots	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I	PCIe 3.0 PCIe 3.0 PCIe 3.0	x16, full l x4, full h x16, full	height, full eight, half I height, full	length, 75\ ength, 25\ length, 75\	W, dou V, ope	ıble-widi n ended	th I	
Expansion slots	Slot 2 (CPU)	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full	x16, full l x4, full he x16, full l height, ful	height, full eight, half I height, full Il length, 25	length, 75\ ength, 25\ length, 75\ 5W	W, dou V, ope W, dou	ıble-widi n ended ıble-widi	th I th	
Expansion slots	Slot 2 (CPU)	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full	x16, full l x4, full he x16, full l height, ful	height, full eight, half I height, full	length, 75\ ength, 25\ length, 75\ 5W	W, dou V, ope W, dou	ible-widt n ended ible-widt n ended	th I th	
Expansion slots	Slot 2 (CPU)	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0	x16, full l x4, full he x16, full l height, ful	height, full eight, half I height, full Il length, 25	length, 75\ ength, 25\ length, 75\ 5W	W, dou V, ope W, dou V, ope	ıble-widi n ended ıble-widi	th I th	lax Qty
Expansion slots	Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F F Slot 6 (PCH) F F Slot 6 (PCH) F Slot 6 (PCH	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0	x16, full h x4, full h x16, full h height, ful x4, full h	height, full eight, half I height, full Il length, 25 eight, half I	length, 75\ ength, 25\ length, 75\ 5W ength, 25\	W, dou V, ope W, dou V, ope	ible-widt n ended ible-widt n ended	th I th I	lax Qty
Expansion slots	Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F F Slot 6 (PCH) F F Slot 6 (PCH) F Slot 6 (PCH	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0	x16, full h x4, full h x16, full h height, ful x4, full h	height, full eight, half I height, full Il length, 25 eight, half I Pow-	length, 75\ ength, 25\ length, 75\ 5W ength, 25\	W, dou V, ope W, dou V, ope	ible-widt n ended ible-widt n ended	th I th I	lax Qty
Expansion slots	Slot 2 (CPU) F	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0	x16, full l x4, full he x16, full l height, full x4, full he lemory	height, full eight, half I height, full Il length, 25 eight, half I Pow- er 68W	length, 75\ ength, 25V length, 75\ 5W ength, 25V	W, dou V, ope W, dou V, ope or	ible-widt n ended ible-widt n ended	th I th I	2
Expansion slots	Slot 2 (CPU)	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE	x16, full h x4, full h x16, full h height, full x4, full h lemory B DDR3 3 GDDR5	height, full eight, half I height, full Il length, 25 eight, half I Pow- er 68W 30W	length, 75\ ength, 25\ length, 75\ SW ength, 25\ Connector 8xmini D 3xminiD	W, dou V, ope W, dou V, ope or P	ible-widt n ended ible-widt n ended	th I th I	2 2
Expansion slots	Slot 2 (CPU)	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE	x16, full h x4, full h x16, full h height, full x4, full h lemory B DDR3 3 GDDR5	height, full eight, half I height, full Il length, 25 eight, half I Pow- er 68W 30W	length, 75\ ength, 25\ length, 25\ length, 75\ 5\ ength, 25\ Connecte 8xmini D 3xminiD 4xminiD	W, dou V, ope W, dou V, ope or P P	ible-widt n ended ible-widt n ended	th I th I	2 2 2
Expansion slots	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics I NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P620 I	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE 2GE	x16, full h x4, full h x16, full h height, full x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, full eight, half I height, full Il length, 25 eight, half I Pow- er 68W 30W 45W	length, 75\ ength, 25\ length, 75\ Wength, 25\ Connecte 8xmini D 3xminiD 4xminiD 4xminiD	W, dou V, ope W, dou V, ope or P P P	ible-widt n ended ible-widt n ended	th I th I	2 2 2 2
	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics I NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P1000 Quadro P1000 I	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE 2GE 4GE	x16, full hex4, full height, full height, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, full eight, half I height, full II length, 25 eight, half I Power er 68W 30W 45W 40W 50W	length, 75\ ength, 25\ length, 25\ length, 75\ W ength, 25\ Connecte 8xmini D 4xminiD 4xminiD 4xminiD 4xminiD	W, dou V, ope W, dou V, ope or P P P	ible-widt n ended ible-widt n ended	th I th I	2 2 2 2 2
Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics I NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P2000 Quadro P2000 I	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE 2GE 4GE 5GE	x16, full hex4, full height, full height, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, full eight, half I height, full II length, 25 eight, half I Power 68W 30W 45W 40W 50W	length, 75\ ength, 25\ length, 25\ length, 75\ W ength, 25\ Connectr 8xmini D 3xminiD 4xminiD 4xminiD 4xminiD 4xDP	W, dou V, ope W, dou V, ope or P P P	ible-widt n ended ible-widt n ended	th I th I	2 2 2 2 2 2 2
	Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P620 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P4000 Quadro P4000 P4000	PCIe 3.0 PCIE 3.0 PCI	x16, full lex4, full height, full height, full height, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, full eight, half I height, full II length, 25 eight, half I Pow- er 68W 30W 45W 40W 50W 75W	length, 75\ ength, 25V length, 75\ Wength, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xminiD 4xDP 4xDP	W, dou V, ope W, dou V, ope or P P P P	ible-widin endedible-widin endedible-widin endedible-widin endedible-widink	th I th I	2 2 2 2 2 2 2 2
Discrete Graphics	Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, f	height, full eight, half I height, full II length, 25 eight, half I Power 68W 30W 45W 40W 50W 75W 120W X 180W D	length, 75\ ength, 25V length, 25V ength, 25V Connecte 8xmini D 4xminiD 4xminiD 4xminiD 4xDP VI-D DL+4	W, dou V, ope W, dou V, ope or P P P P	ible-widt n ended ible-widt n ended	th I th I	2 2 2 2 2 2 2 2 2 2 2 2
Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P50000 Quadro P60000 Quadro P60000 Quadro P60000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 R 4G 2GI 2GI 4GI 5GI 8GI 16GE 24GE	x16, full la x4, full height, f	height, full eight, half I height, full II length, 25 eight, half I Power er 68W 30W 45W 40W 50W 75W 120W X180W D X250W D	length, 75\ ength, 25V length, 25V ength, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xDP VI-D DL+4 VI-D DL+4	W, dou V, ope W, dou V, ope or P P P P P ExDP	ible-widin ended ible-widin ended SLI / N link	th I th I	2 2 2 2 2 2 2 2 2 2 2
Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro RTX 400	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full height, full height, full la x4, full height, full semory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, full eight, half I height, full II length, 25 eight, half I Power 68W 30W 45W 40W 50W 75W 120W X180W D X250W D 160W 3xI	length, 75\ ength, 25\ length, 25\ length, 75\ W ength, 25\ Connecte 8xmini D 4xminiD 4xminiD 4xminiD 4xDP WI-D DL+4 DP, 1xVirtu	W, dou W, ope W, ope or P P P P P ExDP HxDP HxInk	ible-widin endedible-widin endedible-widin endedible-widin state of the state of th	th I th I	2 2 2 2 2 2 2 2 2 2 2 1
Discrete Graphics	Slot 2 (CPU) File Slot 3 (PCH) File Slot 4 (CPU) File Slot 5 File Slot 6 (PCH) File Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P7X 40 Quadro RTX 500 Quadro	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full lex4, full lex4, full lex4, full lex4, full lex4, full lex4, full lemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6 B GDDR6 B GDDR6	height, full eight, half I height, full I length, 25 eight, half I Power 68W 30W 45W 45W 45W 120W X180W D120W X180W D160W 3x 250W 2x 250W D160W 3x 250W 2x 250	length, 75\ ength, 25V length, 75\ SW ength, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xDP 4xDP WI-D DL+4 WI-D DL+4 DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu	W, dou V, ope W, dou V, ope or PP PP PP IXDP IalLink IalLink	ible-widin endedible-widin endedible-widin endedible-widin st. St. No. St. St. St. St.	th I th I	2 2 2 2 2 2 2 2 2 2 2 1 1 2
Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro PT5000 Quadro PTX 500 Quadro RTX 400 Quadro RTX 400 Quadro RTX 500 Quadro RTX 500	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full la x4, full la x4, full la x16, full la k16, full la k16, full la x4, full la x4, full la x4, full la mory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6	height, full eight, half I height, full I length, 25 eight, half I Power 68W 30W 45W 40W 50W 75W 120W X180W D X250W D 160W 35 265W4xl 5 295W4xl	length, 75\ ength, 25V length, 25V length, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xDP 4xDP WI-D DL+4 VI-D DL+4 DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu	W, dou V, ope W, dou V, ope or PP PP ExDP IsalLink IsalLink IsalLink IsalLink	ible-widin endedible-widin ended SLI / N link	th I th I	2 2 2 2 2 2 2 2 2 2 2 2 2 1 1
Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P600 Quadro P4000 Quadro P4000 Quadro P6000 Quadro P6000 Quadro P6000 Quadro P6000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full le x4, full height, f	height, full eight, half I height, full I length, 25 eight, half I Power 68W 30W 45W 40W 50W 120W X 180W D 160W 3x 180W 3x 180W D 160W 3x 180W 3x 180W D 160W 3x 180W 3x 180W 3x 180W D 160W 3x 180W 3x 1	length, 75\ ength, 25\ length, 25\ length, 25\ length, 25\ Connecte 8xmini D 4xminiD 4xminiD 4xminiD 4xDP VI-D DL+4 VI-D DL+4 VI-D DL, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu	W, dou W, ope W, ope or PP PP PR IXDP IzalLink IzalLink IzalLink IzalLink	ible-widin ended ible-widin ended SLI / N link	th I I I I I I I I I I I I I I I I I I I	2 2 2 2 2 2 2 2 2 2 1 2 1 1
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Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P7000 Quadro P6000 Quadro P7000 Quadro	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, f	height, full eight, half I height, full I length, 25 eight, half I Power 68W 30W 45W 40W 50W 120W X 180W D 160W 3x 180W 3x 180W D 160W 3x 180W 3x 180W D 160W 3x 180W	length, 75\ ength, 25V length, 25V length, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xDP VI-D DL+4 VI-D DL+4 VI-D DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DVI-D DL, 4xDP	W, dou W, ope W, dou W, ope or PP PP PR PP IxDP IalLink IalLink IalLink IalLink	ible-widin ended ible-widin ended SLI / N link	th I I I I I I I I I I I I I I I I I I I	2 2 2 2 2 2 2 2 2 1 2 1 1 1 1 1
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Discrete Graphics	Slot 2 (CPU) I Slot 3 (PCH) I Slot 3 (PCH) I Slot 4 (CPU) I Slot 5 I Slot 6 (PCH) I Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full la x4, full la x4, full la x16, full la k16, full la k16, full la x4, full la x4, full la x4, full la x4, full la x4, full la x4, full la x4, full la x6, la GDDR5 la GDDR5 la GDDR5 la GDDR6 la GDDR	height, full eight, half I height, full I length, 25 eight, half I Power 68W 30W 45W 40W 50W 120W X180W D160W3xl 6 265W4xl 235W1x 250W nterface ATA 6Gb/s 12Gb/s, SA 6Gb/s 12Gb/s, SA	length, 75\ ength, 25V ength, 25V length, 75\ SW ength, 25V Connecte 8xmini D 3xminiD 4xminiD 4xminiD 4xDP 4xDP WI-D DL+4 WI-D DL+4 WI-D DL+4 VI-D DL, 1xVirtu DP, 1xVirtu DP, 1xVirtu DP, 1xVirtu DVI-D DL, 4xDP RA 0/1/ TA 0/1/	W, dou W, ope W, dou W, ope or PP PP HxDP HxDP HalLink HalLink HalLink Hallink Hallink Hallink Hallink Hallink Hallink	ible-widin endedible-widin endedible-widin endedible-widin station sta	th I th I NV- M	2 2 2 2 2 2 2 2 2 1 2 1 1 1 1 1
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	Dick Type		Interfese	RPM	Offering	Max Oty		
	Disk Type 3.5" SATA		Interface SATA			Max Qty		
	HDD		6Gb/s SATA	7.2K	1TB/2TB/4TB/6TB	6		
Storage Support	2.5" SATA HDD		6Gb/s	7.2K	500GB/500GB FIPS	6		
	2.5" SATA SSD		SATA 6Gb/s		256GB/512GB/1TB/2TB	6		
	M.2 PCIe SSD		PCIe NVMe		256GB/512GB/1TB/2TB	9		
	PCIe AIC			2 (1 when quad M.2 adapter used)				
	Bay Type	Maximum Drives Qty						
Storage Bays	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.0 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.0 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures							
	Disk bay 0	Jp to ption	4x 3.5" or 2 al)	.5" dis	sks with 4 disk bays (2 bay	ys standard, 2 bays		
Max Storage	Supports up to 9x M.2 SSD + 6x 3.5" HDD/6x 2.5" SATA disks/4x 2.5" SAS HDD +							
Power supply	Supports one of the following: • One fixed 690W, autosensing, 92%, 80 PLUS Platinum qualified • One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified							
Media reader	SD USB 2.		rd reader or	n mos	t models. Optional UHS-II	15-in-1 USB 3.0 reader on		
Network interfaces WLAN + Bluetooth	Integrated one gigabit ethernet (Intel i219LM), supports Wake-on-LAN. Optional PCIe ethernet or wireless adapters are available Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps							
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Optional access panel lock, Kensington lock, and pad lock							
Intel vPro	Intel vPro t	techn	ology supp	orted.	vPro requires Wireless-A	C 8265 if Wi-Fi is needed		
Intel AMT	Intel Active	Mar	nagement Te	echno	logy 11			
Diagnostic	Front panel warning LED. ThinkStation Diagnostics for Windows. Photo-audio transfer							
Base warranty 1 or 3-year limited onsite service with 9x5/NBD								
HD Audio	Realtek AL			4147		/		
Front ports	4x USB 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)							
Rear ports 2x USB 2.0, 4x USB 3.0, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2								
Front: • 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out • 1x eSATA on flex module • 1x USB Type-C on flex module, USB 3.1 gen 1 Rear: • 1x COM port • 2x USB Type-C ports via PCIe adapter, USB 3.1 gen 2. One 15W, one 5W Internal: • 1x internal USB 3.0 port								

ThinkStation P520 Platform Specifications - II of II

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Environmental specification	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)
	Temperature - storage (with package)	-40 °F to 140 °F (-40 °C to 60 °C)
	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)
	Humidity - operating	10%~80%, non-condensing
	Humidity - storage (with package)	10%~90%, non-condensing
	RoHS-compliant. GREENGUARD. E qualified on model 30BE0008US an	PEAT Silver rating. ENERGY STAR 6.1 d 30BE0009US
ISV certifications	Please visit www.thinkworkstations.c	com/isv-certifications/

Note:
1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.
2. To support the maximum expandability, 900W power supply may be needed.
3. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer





ThinkStation P520c Platform Specifications

Form factor	25L Tower										
Dimensions	175mm/6.89" W	175mm/6.89" W x 426mm/16.77" D x 376mm/14.8" H (with feet)									
Weight	Maximum config	guration	: 31.97 lb	(14.5kg)	,						
	D	# of	# of	Base	0	TDD	M	emory			
	Processor	Cores	Threads	Frequenc	cv Cache	TDP		Types			
	Xeon W-2245	8	16	3.9GHz	16.5MB	155W	/ DDI	Ř4-2933			
	Xeon W-2235	6	12	3.8GHz		130W	/ DDI	74-2933			
	Xeon W-2225	4	8	4.1GHz	8.25MB	105W	/ DDI	74-2933			
	Xeon W-2223	4	8	3.6GHz		120W		34-2666			
	Xeon W-2195	18	36	2.3GHz	24.75MB	140W	/ DDI	R4-2666			
D	Xeon W-2175	14	28	2.5GHz	19MB	140W	/ DDI	R4-2666			
Processor Support	Xeon W-2155	10	20	3.3GHz		140W	/ DDI	R4-2666			
	Xeon W-2145	8	16	3.7GHz	11MB	140W	/ DDI	R4-2666			
	Xeon W-2135	6	12	3.7GHz	8.25MB	140W	/ DDI	34-2666			
	Xeon W-2133	6	12	3.6GHz	8.25MB	140W	/ DDI	34-2666			
	Xeon W-2125	4	8	4.0GHz	8.25MB	120W	/ DDI	34-2666			
	Xeon W-2123	4	8	3.6GHz	8.25MB	120W	/ DDI	R4-2666			
	Xeon W-2104	4	4	3.2GHz		120W		34-2400			
	Xeon W-2102	4	4	2.9GHz		120W		34-2400			
Processor Sockets	1x FCL GA2066	1									
Chipset	Intel C422 Chip										
Memory Sockets	4 DIMM sockets		channole								
	DDR4-2666 RD										
Memory Types				33 RUIMM							
Memory Capacity	256GB with 4 x	64GB F	RDIMMs								
Memory Protection											
Expansion slots	Slot 1 (CPU) PCIe 3.0 x16, full height, full length, 75W, Slot 2 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended										
•	Slot 3 (CPU) PCIe 3.0 x16, full height, full length, 75W Slot 4 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended										
	, ,					nen end	led				
	Slot 4 (PCH)	PCIe 3.	0 x4, full l	eight, half	length, 25W, o			May Oh			
	, ,	PCIe 3.				SL	I / NV-	Max Qty			
	Slot 4 (PCH) Graphics	PCle 3.	0 x4, full h	Power	length, 25W, op Connector	SL		,			
	Slot 4 (PCH) Graphics NVS 810	PCIe 3.	0 x4, full h Memory GB DDR3	Power 68W	Connector 8xmini DP	SL	I / NV-	1			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400	PCle 3.	0 x4, full h Memory GB DDR3 B GDDR5	Power 68W 30W	length, 25W, op Connector 8xmini DP 3xminiDP	SL	I / NV-	1 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600	PCle 3. 40 2G 2G	0 x4, full h Memory GB DDR3 B GDDR5 B GDDR5	Power 68W 30W 45W	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP	SL	I / NV-	1 2 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620	PCle 3. 40 2G 2G 2G 2G	0 x4, full h Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5	Power 68W 6 30W 6 45W 6 40W	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4x miniDP	SL	I / NV-	1 2 2 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000	PCle 3. 40 2G 2G 2G 4G	0 x4, full h Memory B DDR3 B GDDR5 B GDDR5 B GDDR5	68W 68W 6 30W 6 45W 6 40W 6 50W	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xminiDP	SL	I / NV-	1 2 2 2 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P2000	PCle 3. 40 2G 2G 2G 4G 5G	0 x4, full I Memory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power 68W 6 30W 6 45W 6 40W 6 50W 6 75W	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4x miniDP 4xminiDP 4xDP	SL	I / NV-	1 2 2 2 2 2 2			
Discrete Graphics Offering	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000	PCle 3. 40 2G 2G 2G 4G 5G 8G	0 x4, full h Memory BB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power 68W 6 30W 6 45W 6 50W 6 75W 6 120W	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4x miniDP 4xminiDP 4xDP 4xDP	SL	I / NV-	1 2 2 2 2 2 2 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P5000	PCle 3. 40 2G 2G 2G 4G 5G 8G 16G	0 x4, full h Memory B GDDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power Power	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xminiDP 4xDP 4xDP DVI-D DL+4xD	SL	I / NV-	1 2 2 2 2 2 2 2			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro RTX 40	PCle 3. 40 2G 2G 2G 4G 5G 8G 16G 000 8G	0 x4, full h Memory BB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6	Power Power	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xminiDP 4xDP 4xDP DVI-D DL+4xD xDP, 1xVirtualL	SL P ink	I / NV- link	1 2 2 2 2 2 2 2 2 1			
	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro RTX 40 Storage Control	PCIe 3. 40 2G 2G 2G 5G 4G 5G 16G 8G 000 8G	0 x4, full l Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power 68W 6 45W 6 45W 6 50W 75W 6 75W 6 75W 8 75W 8 160W 3 160W 3	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xDP 4xDP DVI-D DL+4xD xDP, 1xVirtualL	P ink	I / NV- link	1 2 2 2 2 2 2 2			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro PTX 40 Storage Contro Onboard Intel R	PCIe 3. 40 2G 2G 2G 5G 4G 5G 16G 8G 000 8G	0 x4, full l Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6	Power Power 68W 630W 650W 6	length, 25W, operations of the connector symini DP syminiDP 4xminiDP 4xminiDP 4xDP 4xDP 4xDP 5xDP, 1xVirtualL terface A 6Gb/s	P R 0/1	I / NV- link AID / /10/5	1 2 2 2 2 2 2 2 2 1			
	Slot 4 (PCH) Graphics NVS 810 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5001 Storage Contro Onboard Intel I 9440-8i PCle	PCIe 3. 40 2G 2G 2G 5G 4G 5G 16G 8G 000 8G	0 x4, full l Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power Power 68W 630W 650W 6	length, 25W, operations of the connector and connector as a seminid property of the connector and connector as a seminid property of the connector and connector and connector as a seminid property of the connector and connecto	P	AID //10/5 //10/5	1 2 2 2 2 2 2 2 2 1			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro PTX 40 Storage Contro Onboard Intel F 9440-8i PCle NVMe Basic	PCle 3. 40 2G 2G 2G 4G 5G 8G 16G 000 8G	0 x4, full hemory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 C G	Power	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4x miniDP 4xDP 4xDP DVI-D DL+4xD xDP, 1xVirtualL terface A 6Gb/s /s, SATA 6Gb/s e NVMe	P ink	AID / /10/5 /10/5	1 2 2 2 2 2 2 2 2 1			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5001 Storage Contro Onboard Intel I 9440-8i PCle	PCle 3. 40 2G 2G 2G 4G 5G 8G 16G 000 8G	0 x4, full l Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	Power	length, 25W, operations of the connector and connector as a seminid property of the connector and connector as a seminid property of the connector and connector and connector as a seminid property of the connector and connecto	P ink	AID //10/5 //10/5	1 2 2 2 2 2 2 2 2 1			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 4t Storage Contro Onboard Intel F 9440-8i PCle NVMe Basic NVMe for Intel	PCle 3. 40 26 26 26 46 56 86 166 000 86 siller	0 x4, full I Memory GB DDR3 B GDDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 CODE CODE CODE CODE CODE CODE CODE CODE	Power 68W 6 30W 6 45W 6 40W 6 50W 6 75W 6 120W X 180W 6 160W 3 SAT SAS 12Gb PCI	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xDP 4xDP 4xDP 5xDP, 1xVirtualL 1terface A 6Gb/s 5x SATA 6Gb/s e NVMe	P ink	AID /10/5 /10/5 /10/5 /10/5	1 2 2 2 2 2 2 1 1 1 Cache			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro PTX 40 Storage Contro Onboard Intel I 9440-8i PCle NVMe Basic NVMe for Intel Disk Type	PCle 3. 40 26 26 26 46 56 86 166 000 86 siller RSTe	0 x4, full hemory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 COPT COPT COPT COPT COPT COPT COPT COPT	Power	length, 25W, of Connector 8xmini DP 3xminiDP 4xminiDP 4x miniDP 4xDP 4xDP 4xDP DVI-D DL+4xD xDP, 1xVirtualL terface 7A 6Gb/s /s, SATA 6Gb/s e NVMe Offering	SL P	AID /10/5 /10/5 /10/5 /10/5	1 2 2 2 2 2 2 2 2 1			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 4t Storage Contro Onboard Intel F 9440-8i PCle NVMe Basic NVMe for Intel	PCle 3. 40 26 26 26 26 46 56 166 000 86 sSD	0 x4, full I Memory GB DDR3 B GDDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 CODE CODE CODE CODE CODE CODE CODE CODE	Power	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xDP 4xDP 4xDP 5xDP, 1xVirtualL 1terface A 6Gb/s 5x SATA 6Gb/s e NVMe	P ink	AID /10/5 /10/5 /10/5 /10/5	1 2 2 2 2 2 2 1 1 1 Cache ax Qty			
Offering '	Slot 4 (PCH) Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel F 9440-8i PCle NVMe Basic NVMe for Intel Disk Type 3.5" SATA HDD	PCle 3. 40 26 26 26 26 46 56 86 86 8000 86 88STe	0 x4, full I Memory GB DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 CONTROL OPT OPT Interface ATA 6Gb/5	Power	length, 25W, op Connector 8xmini DP 3xminiDP 4xminiDP 4xminiDP 4xDP 4xDP DVI-D DL+4xD xDP, 1xVirtualL terface A 6Gb/s /s, SATA 6Gb/s e NVMe Offering 1TB/2TB/4TB/6	P ink	AID /10/5 /10/5 /10/5 /10/5	1 2 2 2 2 2 2 2 1 1 1 Cache			

4	Max Storage	Supports up to 5x M.2 SSD + 4x 3.5 All HDD: 24TB using 4x 3.5" HDD	5" HDD/4x 2.5" SSD/4x 2.5" HDD							
4		All SSD: 18TB using 4x 2.5" SATA S	SSD and 5x M.2 SSD							
-1		One fixed 500W, autosensing, 92%								
li	Media reader	SD USB 2.0 card reader on most m	odels. Optional UHS-II 15-in-1 USB 3.0 reader							
IJ	ivicula reader	on flex module								
	Network interfaces	Integrated one gigabit ethernet (Intel i219LM), supports Wake-on-LAN. Optional PCIe ethernet or wireless adapters are available								
		Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up								
		o 867Mbps								
	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Optional access panel lock, Kensington lock, and pad lock								
		Intel vPro technology supported. vP needed	ro requires Wireless-AC 8265 if Wi-Fi is							
	Intel AMT	Intel Active Management Technolog								
		flex module	ws. Optional front 4-digit diagnostic display on							
-		1 or 3-year limited onsite service wi	th 9x5/NBD							
- 18		Realtek ALC662 codec	and the control of th							
\parallel		2x USB 3.0, microphone (3.5mm), h	neadphone (3.5mm) 3x analog audio ports (line-in, line-out, mic-							
		in), 2x PS/2	ox analog audio ports (line-in, line-out, mic-							
4		Supports the following optional port	s:							
4		Front:	C) on flow module, one of two norts							
		 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out 								
		1x eSATA on flex module								
		• 1x USB Type-C on flex module, USB 3.1 gen 1								
Н		Rear: 1x COM port								
			apter, USB 3.1 gen 2. One 15W, one 5W							
		Internal:	,							
		 1x internal USB 3.0 port Temperature - operating 	E0 0 E to 05 0 E (10 0 C to 35 0 C)							
		Temperature - storage (no pack-	50 °F to 95 °F (10 °C to 35 °C)							
		age)	14 °F to 140 °F (-10 °C to 60 °C)							
	Environmental	Temperature - storage (with pack-	-40 °F to 140 °F (-40 °C to 60 °C)							
	specification	Altitude operating	(Unpressurized): -50ft-10000ft (-15.2m-							
		Altitude - operating	3048m) `							
7		Humidity - operating	10%~80%, non-condensing							
		Humidity - storage (with package)	10%~90%, non-condensing							
	Environmental Certifications	RoHS-compliant. GREENGUARD. I qualified on model 30BX0008US ar	EPEAT Silver rating. ENERGY STAR 6.1 and 30BX0009US							
	ISV certifications	Please visit www.thinkworkstations.	com/isv-certifications/							
		Bay Type	Maximum Drives Qty							
$\ \ $		M.2 slot 5x M.2 SSD (2 onboard, 3								
╢		2 flex bays. Supports the f								
긔		 2x half-height optical dri 2x 5.25" 9.0mm optical 								
		 1x 5.25" 9.0mm optical 	drive + 2x 3.5"/2.5" SATA SSD/HDD							
	Storage Bays	 1x 3.5"/2.5" SATA SSD/ 	HDD with Front Access Storage Enclosure							
		Flex Bay • 1x flex module for the form Tray 1: 9.0mm optical	ollowing options:							
			reader, 2x Thunderbolt, or 4-digit diagnostic							
		displáy								
		Port 1 and 2: Front USE								
		Disk bay Up to 2x 3.5"/2.5" disks wi	nt Removable Drive Enclosures							
		DIGIT Day OF TO EX 0.0 /E.O GISKS WI	ui L dion bayo							

Note:

1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.

2. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer













Slot 1 (CPU2)	PCIe 3.0 x16, full height, full length, 75W
Slot 2 (CPU1)	PCIe 3.0 x16, full height, full length, 75W, double-width
Slot 3 (CPU1)	PCle 3.0 x8, full height, full length, 25W, open ended
Slot 4 (CPU1)	PCIe 3.0 x16, full height, full length, 75W, double-width
Slot 5	PCI, full height, full length, 25W
	PCIe 3.0 x4, full height, half length, 25W, open ended

900W PSU supports two 6+2-pin aux power connectors. 690W PSU supports one 6+2-pin aux power connector.

ThinkStation P720 Platform Specifications

Form factor	36L Tower	-						
Dimensions	175mm/6.89" W x 485	mm/19	1" D x 4	46mm/17 6	" H (with fe	eet)		
Weight	Maximum configuratio				(********************************	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Processor Sockets		02.2	J 10 (LO.7	Ng)				
	Up to two 150 W Gen	1 or Ge	en 2 Intel	Xeon Scal	able family	processo	ors. Bronze.	Sil-
Processor Support	ver, Gold, or Platinum				,	'		
	Processor	# of	# of	Base	Cache	TDP	Memory Ty	noc
				Frequency			, ,,	•
	Xeon Gold 6244	8	16	3.6GHz	25MB	150W	DDR4-293	
	Xeon Gold 6242	16	32	2.8GHz	22MB	150W	DDR4-293	
	Xeon Gold 6238T Xeon Gold 6234	<u>22</u> 8	44 16	1.9GHz 3.3GHz	30MB 25MB	125W 130W	DDR4-293 DDR4-293	
	Xeon Gold 6230	20	40	2.1GHz	28MB	125W	DDR4-293	
	Xeon Gold 6226	12	24	2.7GHz	19MB	125W	DDR4-293	
	Xeon Gold 5222	4	8	3.8GHz	16.5MB	105W	DDR4-293	
	Xeon Gold 5218	16	32	2.3GHz	22MB	125W	DDR4-266	66
	Xeon Gold 5217	8	16	3.0GHz	11MB	115W	DDR4-266	
	Xeon Gold 5215	10	20	2.5GHz	13.75MB	85W	DDR4-266	
	Xeon Silver 4216	16	32	2.1GHz	22MB	100W	DDR4-240	
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W	DDR4-240	
	Xeon Silver 4214 Xeon Silver 4210	12 10	24 20	2.2GHz 2.2GHz	17MB 14MB	85W 85W	DDR4-240 DDR4-240	
	Xeon Silver 4209T	8	16	2.2GHz	11MB	70W	DDR4-240	
Processor Offering	Xeon Silver 4208	8	16	2.1GHz	11MB	85W	DDR4-240	
i recessor e normig	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W	DDR4-213	
	Xeon Platinum 8160T		48	2.1GHz	33MB	150W	DDR4-266	
	Xeon Gold 6142	16	32	2.6GHz	22MB	150W	DDR4-266	
	Xeon Gold 6136	12	24	3.0GHz	24.75MB	150W	DDR4-266	
	Xeon Gold 6134	8	16	3.2GHz	24.75MB	130W	DDR4-266	
	Xeon Gold 6128	6	12	3.4GHz	19.25MB	115W	DDR4-266	
	Xeon Gold 5122	4	8	3.6GHz	16.5MB	105W	DDR4-266	
	Xeon Gold 5120T	14	28	2.2GHz	19.25MB	105W	DDR4-240	
	Xeon Gold 5118	12	24	2.3GHz	16.5MB	105W	DDR4-240	
	Xeon Gold 5115 Xeon Silver 4116	10 12	20 24	2.4GHz 2.1GHz	13.75MB 16.5MB	85W 85W	DDR4-240 DDR4-240	
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-240	
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-240	
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-240	
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-240	00
	Xeon Silver 4109T	8	16	2.0GHz	11MB	70W	DDR4-240	
	Xeon Silver 4108	8	16	1.8GHz	11MB	85W	DDR4-240	00
Chipset	Intel C621 Chipset							
Memory Sockets	12 DIMM sockets with	12 cha	ınnels. 6	DIMM sock	ets with 6	channels	per process	or
Memory Types	DDR4-2666 RDIMM							
Memory Capacity	768GB (DDR4-2933 F	RDIMM)	or 384G	iB (DDR4-2	2666 RDIM	M)		
Memory Protection	ECC							
	Slot 1 (CPU2) PCIe 3	3.0 x16	, full heig	ht, full leng	th, 75W			
				ht, full leng		ouble-wid	lth	
Francisco eleke	Slot 3 (CPU1) PCIe 3	3.0 x8, f	full heigh	t, full lengtl	n, 25W, op	en ended		
Expansion slots	Slot 4 (CPU1) PCIe 3	3.0 x16	, full heig	ht, full leng	th, 75W, d	ouble-wid	lth	
				ngth, 25W	, - , -			
			,	t, half leng	th. 25W. or	en ende	b	
	Graphics					SLI/		_
	Graphics	Memo		er	nnector	NVlink		
	NVS 810	4GB DE			mini DP	14411111	2	1
		GB GD			miniDP		3	1
Digarata Cranhi		GB GD			miniDP		3]
Discrete Graphics Offering	Quadro P620 2	GB GD			miniDP		3]
Chemig	Quadro P1000 4	GB GD	DR5 50	OW 4x	miniDP		3	
	Quadro P2000 5	GB GD		5W	4xDP		3	1
		GB GD			4xDP		2	-
			DR5X 18		DL+4xDF		2	-
	Quadro P6000 24	GR GD	DR5X 25	OVV DVI-L	DL+4xDF	<u>'</u>	1	

\neg												
4		Graphics		M	emor	y	Pow-	C	onnecto	r	SLI /	Max
4		Outsides DTV 40	00	000	ODE	200	er	2DD	4.4/:	- II : I -	NVlink	Qty
╛	Diagramata Ovembies	Quadro RTX 40	00	865	GDL	<u> </u>	160W3	SXDP,	IXVIIIu	alLink		2
	Discrete Graphics											1
٦	Offering	Quadro RTX 60										1
		Quadro RTX 80									1	
┨		Quadro GP100					235W	1xDVI		4xDP		1
		Quadro GV100	32G	B HB	3M2	250W		4xDP			1	
		Storage Contro	ller	Type	- 1	nter	face	RAID		Cach	е	
		Onboard Intel									0 40	
		RSTe		Std	SA	AIA 6	6Gb/s	0/1	/10/5			
					SA	S 12	2Gb/s.					
		9440-8i PCIe		Opt			6Gb/s	0/1	/10/5			
	Storage Controller						2Gb/s,					
		9460-16i PCIe		Opt			6Gb/s	0/1/	10/5/6	4GE	DDR4, S	SuperCap
		NVMe Basic		Opt			VVMe	0/	1/10			
		NVMe Premium	1	Opt			VVMe		/10/5			
		NVMe for Intel										
		SSD		Opt	PC	Jie N	√VMe	0/1	/10/5			
								0"				<u> </u>
		Disk Type	Ir	nterfac	e H	RPM		Offeri	ing		Max	
											(Blind co	
										+ 9460		
										6 (Also s addit	ional	
		3.5" SATA HDD	TA 6Gb/s 7.2K			1TB/2TB/4TB/6TB			3			
	Storage Support										4x 2.5" SATA SSD/HDD)	
		2.5" SATA HDD	SA	TA 6G	h/s 7	2K	500G	B/500GB FIPS			10	
		2.5" SAS HDD						0GB/600GB			8	
		2.5" SATA SSD	SA	TA 6Gb/s			256GB/512GB/1TB/2TB			10		
		2.5" PCIe SSD	Cle SSD PCle NVMe 1.5TB							_		
		M 2 PCIe SSD	le SSD PCIe NVMe 256GB/512GB/1TB/2TB									
		PCIe AIC SSD	le AIC SSD PCIe NVMe 480GB						2			
							Maximu					
		Bay Type					Maximu	ווט וווג	ves Qiy			
		/i.2 slot 9x M.2 SSD (2 onboard, 7 via PCIe to M.2 adapter)										
		2 flex bays. Supports the following:										
		2 flex days. Supports the following:2x half-height optical drives										
		• 2x 5	.25	" 9.0m	nm op	tical	drives					
		• 1x 5	.25	" 9.0m	nm op	tical	drive +	1x 3.5	5"/2.5" S	ATA:	SSD/HDE)
		Flex Bay 1x 3	.5"/	2.5" S	ATA S	SSD	/HDD wi	ith Fro	nt Acce	ss St	orage En	closure
Ц		1711					ollowing	optio	ns:			
		Tray	1: 9	9.0mn	n opti	cal		_				
	Storage Bays						reader					
							B 3.0 Ty					
٦							ont Rem					- 6 4 10 - 6 - 1
٦		lowing	bay	s (2 b	ays s	ianc	iard, 2 b	ays of	otionai).	Supp	orts one	of the fol-
٦		• 4x 3.				٠.						
						⊥ 4v	25" 54	TA SS	חחא/ם:	(Blin	d connect	ion
		Disk bay • 4x 3.	4) 2	ו אואנ	י טטו	T 4A	2.5 57	17 00	טטו וישי	יוווט	u commeci	.1011
		• 8x 2	5" S	SATA S	SSD/F	HDD	or 8x 2	5" SA	S HDD	(Bline	d connect	ion
		neede					J. J. Z.	. 5 0/1		,		
		• 2x 2.	5" F	Cle S	SSD +	- 2x	3.5"/2.5'	disks	(Blind	conne	ection nee	eded)
		Supports up to 9										
		PCIe AIC SSD.	ν II	2 00	٠-, در	UN U	.0 1100	, 101 2		J, 1 OX	O 1.DL	^
	Max Storage	All HDD: 36TB (ısin	q 6x 3	3.5" H	IDD						
		All SSD: 38.96T					ATA SSI	D, 9x I	M.2 SSI	D, and	2x PCle	AIC SSD

ThinkStation P720 Platform Specifications

	•						
Power supply	Supports one of the following: One fixed 690W, autosensing, 92%, One fixed 900W, autosensing, 92%,						
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1 reader on flex module						
Network interfaces	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet are available						
WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps						
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Chassis intrusion switch. Optional access panel bock, Kensington lock, and pad lock						
Intel vPro	Intel vPro technology supported. vPro needed	requires Wireless-AC 8265 if Wi-Fi is					
Intel AMT	Intel Active Management Technology						
Diagnostic	Front panel warning LED. ThinkSta-tion Diagnostics for Windows. Photo-audio ransfer with Lenovo PC Diag-nostics for Android and iOS. Optional front 4-digit diagnostic display on flex module						
Base warranty	1 or 3-year limited onsite service with	9x5/NBD					
HD Audio	Realtek ALC662 codec						
Front ports	4x USB 3.1 Gen 1 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)						
Rear ports	2x USB 2.0, 4x USB 3.1 Gen 1, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2						
Optional ports	Supports the following optional ports: Front: 2x Thunderbolt ports (USB Type-C) supports video-out 1x eSATA on flex module 1x USB Type-C on flex module, USE Rear: 1x COM port 2x USB Type-C ports via PCIe adap Internal: 1x internal USB 3.1 Gen 1 port	,					
Environmental specification Temperature - operating							
Environmental Certifications	RoHS-compliant. GREENGUARD. EF fied on model 30BA0007US and 30BA	EAT Silver rating. ENERGY STAR 6.1 quali- A0008US					
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/						

Note:
1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.
2. To support the maximum expandability, 900W power supply may be needed.
3. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer













ThinkStation P920 Platform Specifications

Form factor	55L Tower]	Graphics	
Dimensions	200mm/7.87" W x 620	mm/24.4	" D x 446	3mm/17.56"	H (with feet)		1		
Weight	Maximum configuration	n: 71.3 lk	(32.3kg)	,	,		1	NVS 810	
Processor Sockets	2x FCLGA3647							1	Quadro P400	2
	Lin to two 205 M Con	1 or Ger	2 Intel X	eon Scalabl	e family pro	cessors.	Bronze, Sil-	1	Quadro P600	2
Processor Support	ver, Gold, or Platinum					,	,		Quadro P620	2
	, ,	# of	# of	Base			Memory	1	Quadro P1000	
	Processor			Frequency	Cache	TDP	Types	Discrete Graphics	Quadro P2000	
	Xeon Platinum 8280	28	56	2.7GHz	39MB	205W	DDR4-2933	Offering	Quadro P4000	16
	Xeon Gold 6254	18	36	3.1GHz	25MB	200W	DDR4-2933		Quadro P5000 Quadro P6000	24
	Xeon Gold 6244	8	16	3.6GHz	25MB	150W	DDR4-2933		Quadro RTX 4	
	Xeon Gold 6242	16	32	2.8GHz	22MB	150W	DDR4-2933		Quadro RTX 5	
	Xeon Gold 6238T	22	44	1.9GHz	30MB	125W	DDR4-2933		Quadro RTX 6	
	Xeon Gold 6234	8	16	3.3GHz	25MB	130W	DDR4-2933		Quadro RTX 8	
	Xeon Gold 6230	20	40	2.1GHz	28MB	125W	DDR4-2933		Quadro GP100	
	Xeon Gold 6226	12	24	2.7GHz	19MB	125W	DDR4-2933		Quadro GV100	
	Xeon Gold 5222	4	8	3.8GHz	16.5MB	105W	DDR4-2933		Storage Contro	
	Xeon Gold 5218	16	32	2.3GHz	22MB	125W	DDR4-2666		Onboard Intel	RSTe
	Xeon Gold 5217	8	16	3.0GHz	11MB	115W	DDR4-2666		9440-8i PCIe	11010
	Xeon Gold 5215	10	20	2.5GHz	13.75MB	85W	DDR4-2666	Storage		
	Xeon Silver 4216	16	32	2.1GHz	22MB	100W	DDR4-2400	Controller	9460-16i PCIe	- 1
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W	DDR4-2400		NVMe Basic	(
	Xeon Silver 4214	12	24	2.2GHz	17MB	85W	DDR4-2400		NVMe Premiui	
	Xeon Silver 4210 Xeon Silver 4209T	10 8	20 16	2.2GHz 2.2GHz	14MB 11MB	85W 70W	DDR4-2400 DDR4-2400		NVMe for Intel	SSD
Processor Offering	Xeon Silver 42091	8	16	2.2GHz 2.1GHz	11MB	85W	DDR4-2400		Diak Tupa	Interfac
	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W	DDR4-2133		Disk Type	Interiac
	Xeon Platinum 8160T	24	48	2.1GHz	33MB	150W	DDR4-2666		3.5" SATA	SATA
	Xeon Gold 6154	18	36	3.0GHz	24.75MB	200W	DDR4-2666	6 6	HDD	6Gb/s
	Xeon Gold 6142	16	32	2.6GHz	22MB	150W	DDR4-2666		2.5" SATA	SATA
	Xeon Gold 6136	12	24	3.0GHz	24.75MB	150W	DDR4-2666		HDD	6Gb/s
	Xeon Gold 6134	8	16	3.2GHz	24.75MB	130W	DDR4-2666			CVC
	Xeon Gold 6128	6	12	3.4GHz	19.25MB	115W	DDR4-2666	Storage Support	2.5" SAS HDD	12Gb/s
	Xeon Gold 5122	4	8	3.6GHz	16.5MB	105W	DDR4-2666	Storage Support	2.5" SATA	SATA
	Xeon Gold 5120T	14	28	2.2GHz	19.25MB	105W	DDR4-2400		SSD	6Gb/s
	Xeon Gold 5118	12	24	2.3GHz	16.5MB	105W	DDR4-2400		2.5" PCIe SSD	PCle
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400		2.5 1 010 000	INVIVIE
	Xeon Silver 4116	12	24	2.1GHz	16.5MB	85W	DDR4-2400		M.2 PCIe SSD	PCIe
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-2400			INVIVIE
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-2400		PCIe AIC SSD	PCle
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-2400			NVMe
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-2400		Bay	
	Xeon Silver 4109T	8	16	2.0GHz	11MB	70W	DDR4-2400		Type	
Oh:	Xeon Silver 4108		16	1.8GHz	11MB	85W	DDR4-2400	4	M.2 slot 9x M.	
Chipset	Intel C621 Chipset							4		5" or 2.5
Memory Sockets	16 DIMM sockets with						r processor			half-heig
Memory Types	DDR4-2666 RDIMM, D									5.25" 9.0
Memory Capacity	1TB (DDR4-2666 LRD	IMM or	DDR4-29	33 RDIMM)	or 512GB (DDR4-26	666 RDIMM)]	a 1v	5.25" 9.0
Memory Protection	ECC]	Flex Bay \[\frac{1}{1} \text{X}	3.5"/2.5' flex mod
,	Slot 1 (CPU1) PCIe 3	3.0 x16, 1	full heigh	t, full length,	75W, doub	le-width		Storage Bays		v 1: 9.0r
	Slot 2 (CPU1) PCIe 3	3.0 x4, fu	II height,	full length, 2	25W, open e	ended				y 2: 15-i
	Slot 3 (CPU1) PCIe 3	3.0 x16, 1	ull heigh	t, full length,	75W, doub	le-width				rt 1 and
Expansion slots	Slot 4 (CPU1) PCIe 3	3.0 x4, tu	III height,	full length, 2	25VV, open 6	ended				M.2 SSI
	Slot 1 (CPU1) PCIe 3 Slot 2 (CPU1) PCIe 3 Slot 3 (CPU1) PCIe 3 Slot 3 (CPU1) PCIe 3 Slot 5 (PCH) PCIe 3 Slot 6 (CPU2) PCIe 3 Slot 7 (CPU2) PCIe 3 Slot 8 (CPU2) PCIe 3	.∪ x4, ft l ∩ x16 ∃	ııı rıelgnt, full heich	t, full length, 2 t, full length, full length, 2 half length, 2 t, half length,	≥5vv, open 75W	enuea				drives
	Slot 7 (CPU2) PCIe 3	3.0 x16	ull heigh	t, full length,	, , 5 11 75W. doub	le-width				f the foll
	Slot 8 (CPU2) PCIe 3	3.0 x16.	ull heigh	t, full length,	75W				Disk bay • 4x 3	3.5" SATA
	, , , , , , , , , , , , , , , , , , , ,	-,	- 3					1	• 4x 3	8.5" SATA
								1	0.40	2.5" SATA

	Graphics		ſ	Memo	ory	Power	Conne	ector	SLI / NVlink	Max Qty
	NVS 810			BB DI		68W	8xmin			2
	Quadro P400				DR5	30W	3xmin			5
	Quadro P600		2G	<u>B GE</u>	DR5	45W	4xmin	iDP		4
	Quadro P620		2G	B GE	DR5	40W	4xmin	iDP		4
	Quadro P1000		4G	B GE	DR5	50W	4xmin	iDP		4
Discrete Graphics	Quadro P2000		5G	B GE	DR5	75W	4xD	P		4
Offering	Quadro P4000		8G	B GE	DR5	120W	4xD	P		4
Offering	Quadro P5000		16G	B GD	DR5X	180W	DVI-D DL	+4xDP	SLI	3
	Quadro P6000		24G	<u>B</u> GD	DR5X	250W	DVI-D DL		SLI	3
	Quadro RTX 40	000	8G	B GE	DR6	160W	3xDP, 1xVi	rtualLink		3
	Quadro RTX 50				DDR6	265W	4xDP, 1xVi	rtualLink		3
	Quadro RTX 60	000	240	BB GI	DDR6		4xDP, 1xVi			2
	Quadro RTX 80	000			DDR6		4xDP, 1xVi		NVLink	2
	Quadro GP100				BM2		1xDVI-D D		NVLink	3
	Quadro GV100		32	<u>GB H</u>	BM2	250W	4xD	P	NVLink	3
	Storage Contro	ller	Typ	е		Interfac	е	RAID	Ca	che
	Onboard Intel F	RSTe	Śt		S	ATA 6G	b/s	0/1/10/5		
	9440-8i PCIe		Op		AS 120	ab/s. SA	TA 6Gb/s	0/1/10/5	5	
Storage Controller	9460-16i PCIe		I - '			,	ATA 6Gb/s	0/1/10/5/	4CB [DDR4,
Controller	9400-101 FCIE		Op) J	A3 120	3D/S, 3F	AIA 6Gb/S	0/1/10/5/	Supe	rCap
	NVMe Basic		Op	ot		Cle NVI		0/1/10		
	NVMe Premium		Op			Cle NVI		0/1/10/5		
	NVMe for Intel:	<u>SSD</u>	Op	ot 📗	P	<u>Cle NVI</u>	Me	0/1/10/5	5	
	Disk Type	Interfa	ace	RPM		Offering		Max Qty (9460 used))
	3.5" SATA HDD	SAT 6Gb		7.2K	1TB/2TB/4TB/6TB		6 (Also supports addition 4x 2.5" SATA SSD/HDD			
	2.5" SATA HDD	SAT 6Gb	/s	7.2K	500GB/500GB FIPS			10		
Storage Support	2.5" SAS HDD	SAS 12Gb	o/s	10K	30	00GB/600GB			8	
otolago capport	2.5" SATA SSD	SAT 6Gb	ib/s		256GB/512GB/1TB/2TB			10		
	2.5" PCIe SSD	NVN			1.5TB			4		
	M.2 PCIe SSD	PCI NVN	1e		256GE	3/512GB/1TB/2TB			9	
	PCIe AIC SSD	PCI NVM				480G	iΒ	2		
	Bay Type						n Drives Qt			
	M.2 slot 9x M.2	SSD	(2 (onbo	ard, 7 v	ia PCIe	to M.2 ada	apter)		
	2x 3.5	" or 2.	.5" d	lisks.	Suppo	rts the f	following:			
	 3x h 	ıalf-he	eight	optio	cal drive	es				
					tical dr					
							x 3.5"/2.5" :			
							Front Acc	ess Stora	ge Enclos	ure
Storage Bays	' ' ' ' ' ' ' '					owing o	ptions:			
		1: 9.0					. O Th	لما ما س		
							2x Thunde			
							e-C or eSA		00	
							<i>r</i> able Drive andard, 2 b			orte
						nays si rations:		ays upilu	naij. Jupp	,O1 13
	Disk bay • 4x 3.				, or mgu	audio.				
					+ 4x 2	5" SATA	SSD/HDD)		
							SAS HDD			

ThinkStation P920 Platform Specifications

	Supports up to 9x M.2 SSD + 6x 3.5" AIC SSD.	HDD/10x 2.5" SSD/10x 2.5" HDD + 2x PCIe							
Max Storage	All HDD: 36TB using 6x 3.5" HDD								
	All SSD: 38.96TB using 10x 2.5" SATA SSD, 9x M.2 SSD, and 2x PCIe AIC SSD								
	One fixed 1400 watts, autosensing, 92								
Power supply	Countries with input voltage under 115	5V, output power limited to 1125 watts							
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1 reader on flex module								
Network	ntegrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-								
interfaces	LAN on both two ports. Optional PCIe ethernet are available								
WLAN +	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up								
Bluetooth	to 867Mbps								
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensington lock, and pad lock								
Intel vPro	needed very supported. vPro requires Wireless-AC 8265 if Wi-Fi is								
Intel AMT	Intel Active Management Technology	11							
Diagnostic	Front 4-digit diagnostic display. ThinkStation Diagnostics for Windows. Photo-audio transfer with Lenovo PC Diagnostics for Android and iOS								
Base warranty	1 or 3-year limited onsite service with 9x5/NBD								
HD Audio	Realtek ALC662 codec								
Front ports	4x USB 3.1 Gen 1 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)								
Rear ports	2x USB 2.0, 4x USB 3.1 Gen 1, 2x RJ mic-in), 2x PS/2	-45, 3x analog audio ports (line-in, line-out,							
	Supports the following optional ports: Front:								
	2x Thunderbolt ports (USB Type-C) on flex module, one of two ports								
	supports video-out								
Ontional nort-	• 1x eSATA on flex module								
Optional ports	 1x USB Type-C on flex module, USE Rear: 	3 3.1 gen 1							
	• 1x COM port								
	 2x USB Type-C ports via PCle adapt 	ter, USB 3.1 gen 2. One 15W, one 5W							
	Internal:	,							
	• 1x internal USB 3.1 Gen 1 port								
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)							
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)							
Environmental	Temperature - storage (with package)								
specification	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)							
ı	Humidity - operating	10%~80%, non-condensing							
	Humidity - storage (with package)	10%~90%, non-condensing							
Environmental Certifications	RoHS-compliant. GREENGUARD. EP fied on model 30BC0008US and 30BC	EAT Silver rating. ENERGY STAR 6.1 quali-							
	Please visit www.thinkworkstations.co								

Note:

1. Depending on many factors, actual data transfer speed mentioned on this page may be lower than theoretical speed.

2. Any questions or advice on ThinkStation PSREF, please contact ThinkStation PSREF developer (houyt@lenovo.com)

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Warranty: For a copy of applicable warranties, write to: Lenovo Warranty Information, 1009 Think Place, Morrisville, NC, 27560. Lenovo makes no representation or warranty regarding third party products or services. The Lenovo Limited Warranty applies only to Lenovo hardware products purchased for your own use, and does not transfer upon resale.

Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.

Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit http://psref.lenovo.com/ for the latest version of Product Specifications Reference.

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

December, 2019 - Version 552

Additions in this update

► New product(s)

ThinkVision S27q-10 ThinkVision S24q-10

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(s)

None











PORTABLE USB-C MONITOR CRAFTED FOR IMPROVED PRODUCTIVITY

The ThinkVision M14 is an ultraslim and ultralight mobile monitor. Its 14-inch screen helps you extend your workspace comfortably no matter where work takes you. Compatible with notebooks of any screen size that come with an advanced USB Type-C port*, the ThinkVision M14 can either extend or duplicate your notebook display with one plug. The USB Type-C ports on either side allow both left- and right-handed users to work efficiently, and the ergonomic design enhances user experience. Packed with impressive portability, connectivity, and flexibility features, the ThinkVision M14 is ideal for mobile productivity.



Extreme **Portability**



Connectivity



Flexibility

ACHIEVE TARGETS ON THE GO The ThinkVision M14 boosts productivity with its thin and light form factor. Weighing 570g, this 4.4mm sleek mobile monitor enables easy portability. The stylish design with a Full HD, IPS display provides vivid lifelike visuals, ensuring you never miss out on any detail. With a brightness of 300 nits, the ThinkVision M14 offers a stunning visual experience while consuming content online.



Weight 570g



Screen Size 14 inches



Brightness 300 nits (Typical)





EXPERIENCE ADVANCED CONNECTIVITY

Two innovative USB Type-C ports on either side of the monitor make connectivity effortless. These ports support both power and video delivery simultaneously from a single port. The ThinkVision M14 also offers a 'power pass through' design that powers the mobile monitor by an adapter and charges the notebook at the same time. This feature is suitable for smartphones or notebooks with one USB Type-C port*. The ambidextrous design of this monitor enhances user comfort.



Ambidextrous design: built to enable both left- and-right handed users to work with ease



USB Ports 2 x USB Type-C



Cable USB Type-C to C



WORK THE WAY YOU LIKE The ThinkVision M14 with its admirable flexibility

is built for varied job roles. With a tilt angle of -5°~90°, you can position your monitor screen sizes with the ergonomic height adjustable effortlessly with mounting support for a hands-free viewing experience. The advanced low blue light technology minimizes eye strain, making extended working hours easy.



Tilt 0°~90° **Monitor Stand**

Height Adjustable Foot

Tilt -5°~90° **Eye-care Technology**



*For charging usage, a Lenovo branded 65W adapter (Part No.: SA10E75874) is recommended



Remarkable flexibility: position the monitor in the way that suits your style

Temperature - Operating

Humidity - Operating

Altitude - Operating

Humidity - Non-operating

Altitude - Non-operating

Temperature - Non-operating

0° to 40°C

-20° to 60°C

30 to 80%

30 to 90%

0 to 5000 m

0 to 40,000 ft

Yes

Yes

85%

WW

Warranty

3 Years

7.1

CCC

Yes

EPEAT

Bronze

PVC free

Mercury free

PCC % of plastic resins

Geography Availability

ENERGY STAR® Rating

Arsenic-free Glass

Panel Size 14-inch

Screen Dimensions (W x H, mm) 309.31 x 173.99 mm

Panel Type In-Plane Switching

Backlight **WLED**

Aspect Ratio 16:9 Resolution

1920 x 1080 Pixel Pitch (H x V, mm) 0.1611 x 0.1611 mm

Dot/Pixel Per Inch (DPI/PPI) 157

Viewing angle (H x V @ CR 10:1) 178° / 178° **Response Time (typical)**

6ms with OD Refresh Rate 60 Hz

Brightness (typical) 300 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical) 3M:1

Colour Gamut NTSC (CIE 1931) 72%

Color Support (typical) 16.7 Million

Color Depth 8bit (6bit + FRC) **Anti-Glare**

Yes

Video Input Signals 2 x USB 3.1 Type-C (DP1.2 Alt Mode)

Power Consumption (Typ./Max) 6 W / 7.5 W (Without USB Type-C

(Pon) 4.88 W

output) **ENERGY STAR® Power Consumption**

Power Consumption Sleep/Off

ENERGY STAR® Power Consumption (E_{TEC}) 15.53 kWh

Mode < 0.3 W

in a way that suits your style. Compare content with ease even as you use laptops of different foot. Also, you can wall mount your monitor





Low blue light

Power Consumption Switch-Off Mode < 0.3 W

USB Type-C/Power Delivery Up to 65 W

Power Supply External (no adapter bundle) Voltage Required DC 5 V to 20 V

Tilt Angle (front/back) -5° / 90° **Mounting Support**

Yes (100 mm)

Kensington™ Lock Slot

Cable Management Yes

Raven Black Bezel Width (Side) 5.48mm

Bezel Color

5.47 mm / 23.87 mm

Bezel Width (top / bottom)

Size Packed (D x H x W) (mm / inch)

276 x 61 x 402 mm / 10.87 x 2.40 x 15.83 inches

Size Unpacked w/stand $(D \times H \times W) (mm / inch)$ (Lowest position)

3.8 x 8.23 x 12.73 inches Size Unpacked w/stand $(D \times H \times W) (mm / inch)$

96.54 x 209.03 x 323.37 mm /

(Highest position) 96.54 x 220.03 x 323.37 mm / 3.8 x 8.66 x 12.73 inches

Stand base footprint area (mm²)

10.27 x 2.74 inches Weight Packed (kg / lbs.)

1.67 kg / 3.67 lbs.

Weight Unpacked (kg / lbs.) 0.57 kg / 1.26 lbs.

1 x Monitor with stand

1x QSG

1x Pair of clips

1 x ThinkVision M14 sleeve

1 x USB Type-C cable (1 m)

260.87 x 69.55 mm /

Image Quality Capability

Windows Certification Windows 7 / 10

Mercury free)

ISO 9241-307 China Energy Efficiency Standard

Low Blue Light / Eye Comfort

RoHS (EU 2002/95/EC)

Yes (Arsenic free / Pb free /

Yes (Low Bluelight)















Name E1922s Wide Flat Panel Monitor

Case color **Black**

Type-model 60G2AAR6US / 60G2AAT6EU

Panel TFT-LCD, twisted nematic (TN), White LED backlight

Viewable image size

18.5" (470mm) diagonal 16.1" x 9.1" / 409.8mm x 230.4mm Max view area (W x H)

Native resolution 1366x768 Aspect ratio 16:9 Pixel pitch (mm) 0.3mm Dot/Pixel per Inch 85 dpi

Brightness 200 nits or cd/m2 (typical)

Contrast ratio 600:1 (typical) Pixel response time 5ms (typical)

Color gamut 72%

180° (+/- 90°) horizontal, 100° (+/- 50°) vertical Viewing angle at 10:1 CR

Stand Tilt adjustable stand Sides: 0.73" (18.5mm) 13.44" H x 17.65" W x 6.58" D; Bezel width Dimensions (HxWxD)

341.5mm H x 448.4mm W x 167.2mm D Power supply 13.7 watts typical, 17 watts maximum,

<0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

6.03 lb; 2.74 kg Weight

3 year (includes backlight) March 2014 Limited warranty4

Available date

VESA-compliant² VESA DPMS-compliant ENERGY STAR® 7.0 Power management Ergonomics ISO 9241-307 Emission standards

FCC Class B TCO (TCO Displays 7.0), WEEE, RoHS, EPEAT™ Silver rating Environmental

Preset resolutions VGA:

640x350, 640x480, 720x400 800x600, 832x624 1024x768, 1152x864 SVGA: XGA:

SXGA: 1280x1024 WXGA: 1366x768

Presets / user settings Standard presets: 15

user settings: 16

Viewing adjustments Tilt: 20° backward, -5° forward

Rotating screen

On screen display On screen display with digital user controls (8 languages)

Control features Direct access (control buttons on front) for automatic image setup and adjustment for brightness

Multiple input None

Monitor connectors

Signal cables

VGA 15-pin D-shell, analog, blue detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) with the standard problem of the problem o Mounting features

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Ship group Monitor with stand, 1.8 meter analog signal cable, 1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 18.5-inch monitor

• Supports HD 1366x768 resolution

Supports VESA mount (100mm)
Mercury free panel and arsenic free glass

Kensington lock slot ready for enhanced security
 Support Lenovo Tiny PC via VESA mount

Support Echovo Tiny T O via VE
 Supports optional soundbar
 Microsoft® Windows® 7 certified

Microsoft Windows 8 / Windows 8.1 certified



ThinkVision E1922s Wide Monitor

Lenovo February 2014



E2054 Wide Flat Panel Monitor Name Raven black

Case color Type-model 60DFAAR1US / 60DFAAT1EU

Panel TFT-LCD, In-Plane Switching (IPS), LED backlight **19.5"** (**494mm**) diagonal 16.48" x 10.33" / 418.6mm x 262.4mm Viewable image size

Max view area (W x H) Native resolution 1440x900

Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch 16:10 0.097mm x 0.292mm

87 dpi Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 7ms (typical) Color gamut

Viewing angle at 10:1 CR

178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Stand Tilt adjustable stand

Top: 0.71" (18.0mm)
Bottom: 0.70" (17.9mm)
Sides: 1.02" (26.0mm)
14.65" H x 17.95" W x 7.41" D; Bezel width Dimensions (HxWxD)

372.0mm H x 456.0mm W x 188.3mm D Power supply 16 watts typical, 20 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

6.17 lb; 2.8 kg Weight

Limited warranty 3 year (includes backlight)

Available date November 2015

VESA DPMS-compliant VESA-compliant Power management ENERGY STAR® 6.0 Ergonomics ISO 9241-307

FCC Class B TCO (TCO Displays 6.0), WEEE, RoHS, **EPEAT™ Silver rating** Emission standards Environmental

Preset resolutions 640x480, 720x400

SVGA: 800x600 XGA: 1024x768

1280x768, 1280x1024 SXGA:

WXGA: 1366x768 WXGA+: 1440x900 Standard presets: 18

Presets / user settings user settings: 10

Viewing adjustments Tilt: 22° backward, -5° forward

Rotating screen None

On screen display On screen display with digital user controls (8 languages)

Control features Direct access (control buttons on front) for automatic image setup and adjustment for brightness

Multiple input None

Monitor connectors

Signal cables

VGA 15-pin D-shell, analog, blue detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) with the standard problem of the problem o Mounting features

Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

Ship group Monitor with stand, 1.8 meter analog signal cable, 1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 19.5-inch monitor

• Supports HD 1440x900 resolution

Supports VESA mount (100mm)
Mercury free panel and arsenic free glass

 Kensington lock slot ready for enhanced security Support Lenovo Tiny PC via VESA mount
 Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified

Microsoft Windows 10 certified



ThinkVision E2054 Wide Monitor

Lenovo November 2015













Name LT1913p Square Flat Panel Monitor Case color **Black**

Type-model 60FBHAR1US / 60FBHAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

Viewable image size

19.0" (480.0mm) diagonal 14.76" x 11.80" (374.7mm x 299.8mm) 1280x1024 Max view area (W x H) Optimum resolution Max pixel rate 205MHz (VGA), 165MHz (DVI)

Aspect ratio Pixel pitch (mm) 0.0976 (H) x 0.2928 (V) mm Dot/Pixel per Inch 86.8 dpi Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 7ms (typical) Color gamut 72%

178° horizontal, 178° vertical Viewing angle at 10:1 CR

Tilt, swivel, pivot, and height adjustable stand Sides: 0.68" (17.4mm); top: 0.68" (17.4mm); bottom: 0.68" (17.4mm) Stand Bezel width

Dimensions (HxWxD)

14.63" H x 16.18" W x 10.40" D; 371.5mm H x 411.0mm W x 264.2mm D 24 watts typical, 27 watts maximum, Power supply <0.5 watts standby/suspend, universal,

integrated (no external brick-like power supply)

10.69 lb; 4.85kg Weight

3 year (includes backlight) April 2015 Limited warranty4

Available date

VESA-compliant² VESA DDC2B/CI, EDID 1.3

ENERGY STAR® 7.0 Power management ISO 9241-307 Ergonomics Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 1.1, WEEE, RoHS, **EPEAT™ Silver rating**, ULE Gold Environmental

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600, 823x624 XGA: 1024x768, 1152x864, 1152x900

1280x1024 SXGA: Presets / user settings Standard presets: 20; user settings: 20

Features

- 19-inch Square IPS LED backlit panel
- Supports 1280x1024 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- Mercury and arsenic free glass
- Low Halogen
- Recycled content in plastic material
- Supports optional soundbar
 Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified

- Microsoft Windows 10 certified



ThinkVision LT1913p Square Monitor

Viewing adjustments Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/- 45° Screen pivots 90 degrees from landscape to portrait On screen display with digital user controls (8 languages) Rotating screen On screen display Direct access (buttons on front) for automatic image setup, input switch, and brightness Control features Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Multiple input (1) VGA 15-pin D-shell, analog, blue (2) Digital Visual Interface (DVI-D), digital, white, **HDCP-compliant** Monitor connectors (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DVI-D at each end, digital, 1.8 meter Signal cables Mounting features Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Security Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Monitor, attached stand, Setup poster, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord Ship group

Accessories Limited Warranty 73P2582 Kensington MicroSaver Cable Lock See details at http://support.lenovo.com/en_US/guides-and-manuals/de-Kensington Twin Head Cable Lock Lenovo Security Cable Lock 45K1620 tail.page?DocID=UM008281 57Y4303 Lenovo Easy Reach Monitor Stand 55Y9258 See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision













T1714 Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FDHAR1US / 60FDHAT1EU

Panel TFT-LCD, twisted nematic (TN), White LED backlight

Viewable image size

17.0" (**432mm**) diagonal 13.3" x 10.6" (337.9mm x 270.3mm) Max view area (W x H)

Optimum resolution 1280x1024 Aspect ratio 5:4 Pixel pitch (mm)
Dot/Pixel per Inch 0.264mm 96 dpi

Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72%

Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical

Stand Tilt stand

Sides: 0.69" (17.5mm) Bezel width 14.72" H x 14.74" W x 7.87" D; Dimensions (HxWxD. including stand) 373.9mm H x 374.5mm W x 200mm D Power supply 14.0 watts typical, 18.0 watts maximum,

<0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty 5.75 lb; 2.61kg

3 year (includes backlight) September 2015

Available date

VESA-compliant VESA DDC2B/CI Power management **ENERGY STAR® 7.0** Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600

1024x768, 1152x864, XGA: SXGA: 1280x800, 1280x1024

Presets / user settings Standard presets: 17; user settings: 17

Tilt: 22° back, -5° forward Viewing adjustments

Rotating screen None

On screen display On screen display with digital user controls (8 languages)

Control features

Multiple input

Monitor connectors

Direct access (buttons on front) for automatic image setup and brightness
Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)
(1) VGA 15-pin D-shell, analog, blue
(2) Digital Visual Interface (DVI-D), digital, white, **HDCP-compliant**(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, DVI-D at each end, digital, 1.8 meter
(2) Mall or desk mounting using the Extend Arm or third party accessories meeting the VESA ERMARANE (15) Signal cables

Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Mounting features Security

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

Monitor and stand, Setup poster, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord Ship group

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Easy Reach Monitor Stand 55Y9258

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

17-inch Square LCD monitor

Supports SXGA 1280x1024 resolution

• Includes dual input connection for attachment to two systems concurrently (analog and digital)

Mercury Arsenic free glass

Supports optional soundbar
 Microsoft® Windows® 7 certified
 Microsoft Windows 8 certified

 Microsoft Windows 8.1 certified Microsoft Windows 10 certified



ThinkVision T1714 Monitor













T1714p Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FELAR1US / 60FELAT1EU

Panel TFT-LCD, twisted nematic (TN), White LED backlight

Viewable image size

17.0" (**432mm**) diagonal 13.3" x 10.6" (337.9mm x 270.3mm) Max view area (W x H)

Optimum resolution 1280x1024 Aspect ratio 5:4 Pixel pitch (mm)
Dot/Pixel per Inch 0.264mm 96 dpi

Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical) Color gamut 72%

170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Viewing angle at 10:1 CR

Tilt height adjustable stand Sides: 0.69" (17.5mm) 17.63" H x 14.74" W x 9.61" D; Stand Bezel width Dimensions

(HxWxD. including stand) 447.9mm H x 374.5mm W x 244.2mm D Power supply 14.0 watts typical, 18.0 watts maximum, <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

8.71 lb; 3.95kg

Weight Limited warranty 3 year (includes backlight) September 2015

Available date

VESA-compliant VESA DDC2B/CI Power management **ENERGY STAR® 7.0** Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600

XGA: 1024x768, 1152x864 SXGA: 1280x800, 1280x1024

Presets / user settings Standard presets: 22;

user settings: 22

Features

- 17-inch Square LCD monitor
- Supports SXGA 1280x1024 resolution
- Includes dual input connection for attachment to two systems concurrently (analog and digital)
- Mercury Arsenic free glass
- Supports Lenovo Tiny PC and 3rd party thin client via optional Lenovo bracket
- Supports optional soundbar
- Microsoft® Windows® 7 certified
 Microsoft Windows 8 certified
- Microsoft Windows 8.1 certified
- Microsoft Windows 10 certified



ThinkVision T1714p Monitor

Tilt: 22° back, -5° forward; lift: 4.3" (110mm) Viewing adjustments

Rotating screen None

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On screen display On screen display with digital user controls (8 languages)

Control features

Direct access (buttons on front) for automatic image setup and brightness
Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)
(1) VGA 15-pin D-shell, analog, blue
(2) Digital Visual Interface (DVI-D), digital, white, **HDCP-compliant**(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, DVI-D at each end, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA EDMPMI® (10) Multiple input

Monitor connectors

Signal cables

Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Mounting features Security

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

Monitor and stand, Setup poster, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, 1.8 meter black power cord Ship group

Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/de**Accessories**

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Easy Reach Monitor Stand 55Y9258

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision













Lenovo™ ThinkVision® T2054p Monitor

SPECIFICATIONS

DISPLAY		MECHANICAL	
Panel Size	19.45"	Tilt Angle (Front / Back)	-5° ~ 22°
Panel Size Panel Type Backlit Viewable Area (Diagonal) Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP / PPI) Color Gamut (CIE 1931) Number of Colors Response Time Anti-Glare	IP.45" IPS WLED 19.45" 262.35 x 418.61 1440 x 900 16:10 178° / 178° 250 cd/m² 1000:1 0.0969 x 0.2915 87.3 72% 16.7 M 7 ms Yes	Swivel Angle (Left / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA* Mount (mm) Kensington* Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width (Side) (mm / inches) Bezel Width (Top / Bottom) (mm / inches)	-45° - 45° 110 No 100 x 100 Yes Yes No Yes Raven Black 17 / 0.67" 17 / 0.67"
SIGNAL INPUT		SIGNAL INTERFACE / PERFORMANCE	
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA, HDMI™, DisplayPort™ VGA 1.8 m No No	Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed / Bandwidth Default Color Temperature Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages	30 kHz - 81 kHz 50 Hz - 75 Hz 1440 x 900 VGA : 150 MHz HDMI™ : 150 MHz DisplayPort™: 150 MHz 7200K 22 16 5 8
POWER CONSUMPTION		COMPLIANCE	
Power Consumption Typical Max. without USB Hub Max. with USB Hub Sleep-Mode Off-Mode Heat Dissipation Typical Max. Power Supply Power Voltage Voltage Dynamic Frequency	14.5 W 21 W N/A 0.3 W 0.3 W 49.45 Btu/h 71.61 Btu/h Internal 90 - 264 VAC, 1.5 A 47 - 63 Hz	EPEAT™ ENERGY STAR® Rating ULE TCO® TCO® Edge TUV GREENGUARD® ROHS (EU 2002/95/EC) Windows Certification China Energy Efficiency Standard	Silver 6.0 Gold 6.0 2.0 Yes No Yes Windows 7, Windows 8, Windows 8.1, Windows 10 Tier 1
DIMENSIONS (W X D X H)		ENVIRONMENTAL	
Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Head Only) (mm) (inches) Distance from Table to Panel Lowest Pixel at Bottom of Screen	509 x 176 x 368 20.04" x 6.93" x 14.49" 454.2 x 242.6 x 345.9 ~ 455.9 17.88" x 9.55" x 13.62" ~ 17.95" 454.2 x 53 x 297.9 17.88" x 2.09" x 11.73" (mm / inches) 65.8 / 2.59"	Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating Arsenic-free Glass PVC Free	0 °C - 45 °C -20 °C - 60 °C (non-condensing) 10% - 80% 5% - 95% (non-condensing) 8,000 ft 40,000 ft Yes Yes
Highest Pixel at Top of Screen Stand Base Footprint Area	65.8 / 2.59" 328.2 / 12.92"	Mercury Free PCC % of Plastic Resins Low Halogen	Yes 85% No
(mm / inches) Weight	Diameter 240 / 9.45"	WARRANTY AND AVAILABILITY	
Packed Unpacked Monitor Head	Starting at 10.8 lbs (4.9 kg) Starting at 8.15 lbs (3.7 kg) Starting at 4.85 lbs (2.2 kg)	Warranty Geography Availability ThinkVision* Logo	3 Years World Wide Yes





Global Model

Yes











E21 Wide Flat Panel Monitor Name Bezel color **Black**

61B9JAR1US / 61B9JAT1EU Type-model

Panel TFT-LCD, twisted nematic (TN), White LED backlight

Viewable image size

20.7" (**525.78mm**) diagonal 18.03" x 10.14" (457.92mm x 257.58mm) Max view area (W x H)

Native resolution 1920x1080

Aspect ratio 16:9

Pixel pitch (mm) 0.2385 x 0.2385 mm Dot/Pixel per Inch 106 dpi

Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical)

Pixel response time 5ms (typical) Color gamut 72%

170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Viewing angle at 10:1 CR

Stand Tilt adjustable stand Sides: 0.6" (15.3mm) 14.6" H x 19.31" W x 8.07" D; Bezel width

Dimensions (HxWxD)

370.9mm H x 490.5mm W x 204.9mm D

18 watts typical, Power supply 23 watts maximum.

<0.3 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight

5.82 lb; 2.64 kg 3 year (includes backlight) Limited warranty

August 2017 Available date

VESA DDC2B/CI VESA-compliant ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental

Preset resolutions 640x350, 640x480, 720x400 800x600, 832x624

SVGA: XGA: 1024x768, 1152x864

1920x1080

SXGA: 1280x1024 WXGA+: 1440x900 WSXGA+: 1680x1050

Presets display modes Standard presets: 22

Viewing adjustments Tilt: 22° back, -5° forward Rotating screen None

On screen display On screen display with digital user controls (8 languages)

Control features Direct access (buttons on front) for power, menu, input source select and brightness

USB hub None

Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

Monitor connectors

Full HD:

Signal cables

(1) VGA 15-pin D-shell, analog, blue
(2) DisplayPort (1.2), digital, black, **HDCP-compliant**(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Mounting features Security

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

Ship group Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 20.7-inch monitor

 Supports 1920x1080 resolution Supports ThinkCentre Tiny Clamp Bracket

· Supports optional soundbar EPEAT Gold certified

Low Blue Light certification
 Microsoft® Windows® 7 certified
 Microsoft Windows 10 certified



ThinkVision F21 Wide Monitor

Lenovo August 2017













E24 Wide Flat Panel Monitor Name Bezel color **Black**

Type-model 61B7JAR6US / 61B7JAT6EU

Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

23.8" (**604.7mm**) diagonal 20.75" x 11.67" (527.04mm x 296.46mm) **1920x1080** Viewable image size Max view area (W x H)

Native resolution Aspect ratio 16:9

Pixel pitch (mm) 0.2745 x 0.2745 mm Dot/Pixel per Inch 92.5 dpi

Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical) Color gamut 72%

Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical

Tilt adjustable stand Stand Bezel width

Sides: 0.51" (13mm) 15.9" H x 21.81" W x 8.07" D; 403.8mm H x 554mm W x 204.9mm D Dimensions (HxWxD)

Power supply

18 watts typical, 23 watts maximum,

<0.3 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty 8.2 lb; 3.7 kg
3 year (includes backlight)

August 2017 Available date

VESA DDC2B/CI VESA-compliant ENERGY STAR® qualified Power management ISO 9241-307 Ergonomics

Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental

Preset resolutions 640x350, 640x480, 720x400 800x600, 832x624

SVGA: XGA: 1024x768, 1152x864

SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900

WSXGA+: 1680x1050 Full HD: 1920x1080

Presets display modes Standard presets: 24; user settings: 20

Viewing adjustments Tilt: 22° back, -5° forward

Rotating screen None

On screen display On screen display with digital user controls (8 languages)

Control features Direct access (buttons on front) for power, menu, input source select and brightness USB hub None

Multiple input

Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Dual input (two different PCs attach to two different connectors, one PC shows image, selectivia L (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, HDCP-compliant (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security boyled for attachment of optional cable lock (Kensington® lock-compatible) Monitor connectors

Signal cables

Mounting features

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Ship group Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable,

1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 23.8-inch monitor • Supports 1920x1080 resolution

Supports ThinkCentre Tiny VESA mount

Supports optional soundbar

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision E24 Wide Monitor













P24h Wide Flat Panel Monitor Name Bezel color

Black

61AEGAR3US / 61AEGAT3EU Type-model Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **23.8**" (**604.7mm**) diagonal 20.74" x 11.67" (526.9mm x 296.4mm)

124 dpi

0.2058x 0.2058 mm

1000:1 (typical)

24 watts typical,

99% sRGB

300 nits or cd/m2 (typical)

4ms (extreme) / 6ms (typical)

178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 14.7" H x 21.26" W x 10.3" D;

373.4mm H x 540.2mm W x 261.75mm D

120 watts maximum (with USB 3.0 hub), <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

Viewable image size Max view area (W x H)

2560x1440 Native resolution 16:9

Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch Brightness

Contrast ratio Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date

12.54 lb; 5.69 kg

3 year (includes backlight) April 2017 VESA DDC2B/CI

VESA-compliant Power management Ergonomics Emission standards Environmental

ENERGY STAR® qualified ISO 9241-307 FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Preset resolutions

640x480, 720x400 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768

WXGA+: 1440x900, 1680x900 WSXGA+: 1680x1050 Full HD: 1920x1080, 1920x1200

QHD: 2560x1440 HDMI: 22; DP: 14

Viewing adjustments Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand

Rotating screen On screen display

Presets display modes

Control features USB hub Multimedia Camera

Multiple input Monitor connectors

Signal cables Mounting features Security

tail.page?DocID=UM008281

Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

(2) DisplayPort (1.2), digital (3) DisplayPort-out, digital (4) USB 3.1 Type-C (1) USB 3.1 Type-C cable, 1.8 meter

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/de-

Screen pivots 90 degrees from landscape to portrait

On screen display with digital user controls (8 languages)

Support HDMI, DisplayPort, USB 3.1 Type-C, DisplayPort-out (1) 2*HDMI (1.4), digital, **HDCP-compliant** (2) DisplayPort (1.2), digital, **HDCP-compliant**

Direct access (buttons on front) for power, menu, input source select and brightness USB Hub: one USB 3.1 Type-C upstream port, four USB 3.0 Type-A downstream ports Audio-out, optional sound bar supported

Monitor with stand, Safety and Warranty Information, 1.8 meter USB 3.1 Type-C cable, 1.8 meter black power cord Ship group

Features

- Widescreen 23.8-inch monitor • Supports 2560x1440 resolution
- · Supports optional soundbar
- Supports ThinkCentre Tiny Clamp Bracket
- Includes dual input connection for attachment to two systems concurrently
- EPEAT Gold certified
- Microsoft® Windows® 7 certified
- Microsoft Windows 10 certified



ThinkVision P24h Wide Monitor

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock

73P2582 45K1620













Lenovo ThinkVision P24q

P24q Wide Flat Panel Monitor Name

Case color Black

61A5GAR3US / 61A5GAT3EU Type-model

Panel TFT-LCD, IPS (In-Plane Switching), White LED

Viewable image size

23.8" (**604.5mm**) diagonal 20.74" x 11.67" (526.85mm x 296.35mm) **2560x1440** Max view area (W x H)

Optimum resolution Max pixel rate 300MHz Aspect ratio 16:9

Pixel pitch (mm) 0.2058 x 0.2058mm

Dot/Pixel per Inch 123 dpi

Brightness 300 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 4ms Color gamut 99% sRGB

Viewing angle at 10:1 CR 178° horizontal, 178° vertical

Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 14.7" H x 21.26" W x 10.3" D; Stand

Bezel width

Dimensions

(HxWxD, including stand) Power supply

373.4mm H x 540.2mm W x 261.75mm D 24 watts typical,

67 watts maximum (with USB),

<0.5 watts sleep/off; <0.5 watts switch off

integrated (no external brick-like power supply)

12.35 lb; 5.6kg (including stand)

Weight Limited warranty 3 year January 2017 Available date

VESA-compliant VESA DDC2B/CI Power management **ENERGY STAR® 7.0** Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, RoHS, **EPEAT™ Silver rating**, Environmental

ULE Gold

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 1024x768 XGA: SXGA: 1280x1024 WXGA: 1366x768

1440x900, 1600x900 WXGA+: WSXGA+: 1680x1050

1920x1080, 1920x1200 Full HD:

QHD: 2560x1440

Presets / user settings Standard presets: 20; user settings: 24

Tilt: 30° back, -5° forward; lift: 4.33" (110mm); swivel: +/-45° Screen pivots 90 degrees from landscape to portrait Viewing adjustments Rotating screen On screen display On screen display with digital user controls (8 languages) Control features Direct access for menu, source switch, and brightness

USB hub USB Hub: one USB 3.0 upstream port, four USB 3.0 downstream ports

Multimedia Audio-out, optional sound bar supported

Camera

Multiple input

None
Support HDMI, DisplayPort, mini DisplayPort, DisplayPort-out
(1) 2*HDMI (1.4), digital, **HDCP-compliant**(2) DisplayPort (1.2), digital, **HDCP-compliant**(3) Mini DisplayPort, digital, **HDCP-compliant**(1) detachable, mini DisplayPort to DisplayPort, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Monitor connectors

Signal cables

Mounting features Security

Monitor, detachable stand, Quick start and safety poster, 1.8 meter USB 3.0 cable, Ship group

1.8 meter mini DP to DP cable, 1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en US/quides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620 Lenovo Security Cable Lock

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

- 23.8-inch IPS LED backlit monitor • Supports 2560x1440 resolution
- 5-Ports USB hub, support USB 3.0
- Support ThinkCentre Tiny
- Supports optional soundbar Microsoft® Windows® 7 certified
- Microsoft Windows 10 certified



ThinkVision P24q Monitor













Think Vision® S22e-19

DISPLAY

Panel Size

21.5 inch

Screen Dimensions (H x V) (mm)

476.06 (H) × 267.79 (V)

Panel Type

VΑ

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.2480×0.2480

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode) 6 ms (normal mode)

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support (typical)

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

Size Packed (D x H x W) (mm/inch)

120 x 350 x 582 mm / 4.7 x 13.7 x 22.9 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Lowest Position)

200.0 x 373.8 x 489.3 mm / 7.87 x 14.71 x 19.26 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Highest Position)

200.0 x 373.8 x 489.3 mm / 7.87 x 14.71 x 19.26 inch

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

41.5 x 296.8 x 489.3 mm / 1.63 x 11.68 x 19.26 inch

Weight Packed (kg/lbs.)

4.07kg / 8.97 lbs.

Weight Unpacked (kg/lbs.)

2.75kg / 6.06 lbs.

Weight (Monitor Head Only) (kg/lbs.)

2.46kg / 5.42 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front / back)

-5°/22°

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.2 mm

WHAT'S IN THE BOX

Monitor with stand

1x HDMI Cable

1x Power Cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

TCO

TCO 7.0/TCO Edge 2.0

EPEAT™

Gold

RoHS

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Low Blue Light

Yes



























Think Vision® S24e-10

DISPLAY

Panel Size

23.8-inch

Screen Dimensions (H x V)

527.04 x 296.46 mm

Panel Type

3-side NearEdgelss, VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V)

0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

Viewing Angle (H x V @ CR 10:1)

178°/178°

Response Time (gray to gray)

4 ms (Extreme Mode)

6 ms (Normal Mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

Color Gamut NTSC (CIE 1931)

72% NTSC

Color Support

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x VGA 1 x HDMI 1.4

Video Cable Length

18 m

Audio Signal

1 x Audio Out (3.5 mm)

MULTI-MEDIA

Optional Speakers Support

Yes

SPECIAL FEATURES

Sync Technology

FreeSync™

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

POWER

Power Consumption (Typ./Max)

24W / 31W

Power Consumption Sleep/Off Mode

< 0.3W

Power Consumption Switch-Off Mode

< 0.3W

Power Supply

Internal

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5º / 22º

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Cable Management

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 22 mm

DIMENSION

Size Packed (D x H x W)

(mm/inch)

122 x 405 x 639 mm / 4.80 x 15.94 x 25.16 inches

Size Unpacked w/stand (D x H x W) (mm/inch) (Lowest Position)

200.0 x 402.7 x 539.5 mm / 7.87 x 15.85 x 21.24 inches

Size Unpacked w/stand (D x H x W) (mm/inch) (Highest Position)

200.0 x 402.7 x 539.5 mm / 7.87 x 15.85 x 21.24 inches

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

41.5 x 325.7 x 539.5 mm / 1.63 x 12.82 x 21.24 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 99.0 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 399.9 mm

Weight Packed (kg/lbs.) 4.84ka / 10.67 lbs.

Weight Unpacked (kg/lbs.)

3.36kg / 7.41 lbs.

Weight (Monitor Head Only) (kg/lbs.)

3.07kg / 6.77 lbs.

Full Container Load (40' STD / 20' STD)

1660 / 800 Units

WHAT'S IN THE BOX

Monitor with stand 1 x HDMI Cable

1 x Power Cable (1.8m)

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.1

CCC

Yes

EPEAT™

Silver

ULE

Gold

RoHS (EU 2002/95/EC)

Yes(2011/65/EU)

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Low Blue Light

Yes











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ThinkVision S24q-10

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

124

Viewing Angle (H x V @ CR 10:1)

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

240 cd/m²

Brightness (peak)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

20W / 31W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

Energystar Power Consumption (P_{on}/E_{TEC})

16.76 W / 52.75 kWh

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 21.4 mm

DIMENSION

Size Packed (D x H x W, mm/inch)

122 x 405 x 639 mm / 4.80 x 15.94 x 25.16 inches

Size Unpacked w/stand (D x H x W, mm/inch) (lowest position)

200 x 402.7 x 539.8 mm / 7.87 x 15.85 x 21.25 inches

Size Unpacked w/stand (D x H x W, mm/inch) (highest position)

200 x 402.7 x 539.8 mm / 7.87 x 15.85 x 21.25 inches

Size Unpacked w/o Stand (D x H x W, mm/inch) (head only)

42 x 325.7 x 539.8 mm / 1.65 x 12.82 x 21.25 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 98.4 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 399.9 mm

Weight Packed (kg/lb) 5.10 kg / 11.24 lbs.

0.10 11.9 / 1.12 / 1.001

Weight Unpacked (kg/lb) 3.50 kg / 7.72 lbs.

Weight (monitor head only) (kg/lb) 3.21 kg / 7.08 lbs.

Full Container Load (40' STD / 20' STD) 1660 / 800 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x HDMI cable (1.8 m) Quick setup guide

CERTIFICATION

ENERGY STAR® Rating

8.0

CCC Yes

TCO

TCO Edge

2.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard Tier 1

TÜV Eye Comfort

Yes















Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.2 Gen2 & 20 Gbit/s for USB 3.2.

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T2224d Wide Flat Panel Monitor Name

Bezel color **Black**

Type-model 60EBJAR1US / 60EBJAT1EU

Panel TFT-LCD, Vertical Alignment panel (VA),

White LED backlight Viewable image size

21.5" (**546mm**) diagonal 18.74" x 10.54" (476.1mm x 267.8mm) **1920x1080** Max view area (W x H)

Native resolution Aspect ratio 16:9

Pixel pitch (mm) 0.248 x 0.248 mm

Dot/Pixel per Inch 102 dpi

Brightness 250 nits or cd/m² (typical)

Contrast ratio 3000:1 (typical)

7ms (typical); 4ms (extreme mode) Pixel response time Color gamut

Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical

Stand Tilt stànd

Bezel width Sides: 0.69" (17.6mm)

Dimensions (HxWxD)

15.02" H x 20.19" W x 8.06" D; 381.4mm H x 512.9mm W x 204.9mm D

20 watts typical, 25 watts maximum Power supply

<0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty 6.48 lb; 2.94 kg

3 year (includes backlight)

July 2016 Available date

VESA-compliant VESA DDC2B/CI

ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ SILVER rating** Environmental

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA: 1280x768, 1280x800

WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080

Presets / user settings Standard presets: 22; user settings: 22

Viewing adjustments Tilt: 22° back, -5° forward

Rotating screen None

On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for automatic image setup, dual input and brightness

USB hub None

Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

Monitor connectors

Signal cables

Dual input (two different PCs attach to two different connectors; one PC shows image; select via b (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, **HDCP-compliant** (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features

Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group

1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 73P2582 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

Supports ThinkCentre Tiny via VESA back mount

systems concurrently (analog and digital)

Includes dual input connection for attachment to two

Widescreen 21.5-inch monitor

· Supports optional soundbar

EPEAT Silver certified

• Supports 1920x1080 resolution

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified

Think Vision T2224d Wide Monitor













T2254 Wide Flat Panel Monitor Name

Bezel color Raven black Type-model 60F6HAR1EU

Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size

22.0" (**559mm**) diagonal 18.70" x 11.70" (473.8mm x 296.1mm) **1680x1050** Max view area (W x H)

Native resolution

Aspect ratio 16:10 Pixel pitch (mm)

0.282 x 0.282 mm Dot/Pixel per Inch 90 dpi

Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical)

Color gamut 72%

170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt and height adjustable stand Sides: 0.67" (17mm) 14.97" H x 20.05" W x 9.61" D; Viewing angle at 10:1 CR

Stand

Bezel width Dimensions (HxWxD)

380.2mm H x 509.3mm W x 244.2mm D

16 watts typical, Power supply

22 watts maximum,

22 watts standby/suspend, universal, integrated (no external brick-like power supply)
10.38 lb; 4.71 kg
3 year (includes backlight)
March 2015

Weight Limited warranty

Available date

VESA DDC2B/CI VESA-compliant ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards None

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Gold rating** Environmental

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768

WXGA+: 1440x900 WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 26; user settings: 20

Tilt: 30° back, -5° forward; lift: 4.3" (110mm)

Rotating screen

Viewing adjustments

On screen display On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, dual input and brightness

Control features

USB hub None

Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors

Signal cables

(1) VGA 15-pin D-shell, analog, blue
(2) Digital Visual Interface (DVI-D), digital, white, **HDCP-compliant**(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, DVI-D at each end, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Mounting features

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DVI-D cable, Ship group

1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Kensington MicroSaver Cable Lock

73P2582 Kensington Twin Head Cable Lock 45K1620

Accessories

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 22.0-inch monitor

• Supports 1680x1050 resolution Supports ThinkCentre Tiny Clamp Bracket

Includes dual input connection for attachment to two

systems concurrently (analog and digital) ÉPEAT Gold certified

Supports optional soundbar

Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified

Microsoft Windows 10 certified

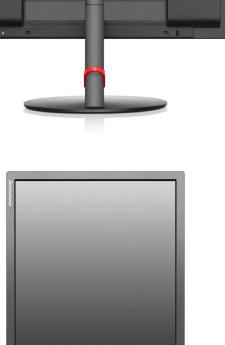


ThinkVision T2254 Wide Monitor

© Lenovo (T2254) November 2016















T2254p Wide Flat Panel Monitor Name

Bezel color Raven black

Type-model 61BAMAR2US / 60E1MAR2US / 60CCMAR2US /

60CCMAT2EU / 61BAMAT2EU

Panel TFT-LCD, twisted nematic (TN), White LED backlight Viewable image size

22.0" (**559mm**) diagonal 18.70" x 11.70" (473.8mm x 296.1mm) **1680x1050** Max view area (W x H) Native resolution

Aspect ratio 16:10 Pixel pitch (mm) 0.282 x 0.282 mm Dot/Pixel per Inch 90 dpi

Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical)

Pixel response time 5ms (typical) Color gamut

Viewing angle at 10:1 CR 170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.67" (17.1mm) 14.63" H x 20.01" W x 9.55" D; Stand

Bezel width Dimensions (HxWxD)

371.7mm H x 509.3mm W x 242.7mm D

Power supply

20 watts typical, 25 watts maximum,

<0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty

10.14 lb; 4.60 kg

3 year (includes backlight) Available date March 2015

VESA-compliant Power management Ergonomics

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Gold rating** Environmental

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768 WXGA+: 1440x900

WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 28;

user settings: 20

Features

- Widescreen 22.0-inch monitor • Supports 1680x1050 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- Supports optional soundbar
- Includes dual input connection for attachment to two systems concurrently (analog and digital)
- EPEAT Gold certified
- Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified
- Microsoft Windows 10 certified



ThinkVision T2254p Wide Monitor

Viewing adjustments Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand

Rotating screen Screen pivots 90 degrees from landscape to portrait On screen display with digital user controls (8 languages) On screen display Control features Direct access (buttons on front) for automatic image setup, dual input and brightness

USB hub None Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

Multiple input Monitor connectors

(1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter

Signal cables

(2) detachable, DisplayPort at each end, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount
Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features

Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group

1.8 meter black power cord

Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision













ThinkVision T22i-10 MONITOR



SPECIFICATIONS

DISPLAY

(mm)

Panel Size Panel Type **IPS** Backlight WLED Resolution (H x V) Aspect Ratio 16:9 Anti-Glare Yes Borderless Screen Yes Screen Dimensions (W x H)

(inches) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio

Pixel Pitch (mm) Color Gamut NTSC (CIE 1931) Color Support (Typical) Response Time

21.5" Wide 1920 x 1080

476.064 x 267.786 18.74" x 10.54" 250 cd/m² 178°/178° 1000:1 3M:1 0.248 x 0.248

72% 16.7 Million 4/6/14 ms

DIMENSIONS (W x D x H)

Size Packed (mm) 577 x 378 x 191 22.7" x 14.9" x 7.5" (inches) Size Unpacked with Stand

(mm) (inches)

Size Monitor Head Only

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weight Packed

Unpacked Monitor Head Only

489.7 x 251.9 x 357.6 19.28" x 9.92" x 14.08"

489.7 x 43.5 x 297 19.28" x 1.71" x 11.69"

240 x 240 9.45" x 9.45"

Starting at 16.36 lbs (7.42 kg) Starting at 10.85 lbs (4.92 kg) Starting at 6.94 lbs (3.15 kg)

CONNECTIVITY Video Input Signals

Video Cables Supplied (Length) Audio

OSD Languages

VGA + HDMI™ 1.4 + DisplayPort™ 1.2 18 m

Audio-Out

English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian

POWER CONSUMPTION

Typical 20 W Maximum 55 W Sleep-Mode <0.5 W Switch Off-Mode <0.5 W Power Supply Internal 100 VAC - 240 VAC Power Voltage

MECHANICAL

Tilt Angle (Front / Back) -5°/30° Swivel Angle (Left / Right) +/-45° Lift (mm / inches) 110 / 4.33" Pivot -90° / 90° Cable Management Yes Kensington® Lock Yes VESA® Mounting Yes (100 mm) Bezel Color Raven Black Bezel Width

Top (mm / inches) 2 / 0.08" Bottom (mm / inches) 21.4 / 0.84" Sides (mm / inches) 2 / 0.08"

COMPLIANCE

Arsenic-Free Glass Yes Yes; Without Cable PVC-Free Mercury-Free Yes EPEAT™ Silver **ENERGY STAR® Rating** 7.0 TCO® 7.0 TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2

Windows Certification Windows 7 / Windows 10

















ThinkVision T22V-10 MONITOR

SPECIFICATIONS

DISPLAY		ENVIRONMENTAL	
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off)	21.5" In-Plane Switching WLED 1920 x 1080 16:9 Yes 476.06 x 267.79 250 cd/m² 178°/178° 1000:1 3M:1 0.25 x 0.25 102 72% sRGB 4/6/14 ms (G-to-G)	Temperature Operating Non-Operating Humidity Operating Non-Operating Altitude Operating Non-Operating Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	0°C - 40°C -20°C - 60°C 10% - 80% 5% - 95% 0 m - 8000 m 0 ft - 40,000 ft Yes Yes Yes >85%
POWER CONSUMPTION		DIMENSIONS (W x D x H)	
Typical Maximum Sleep-Mode Switch Off-Mode Power Supply Power Voltage Voltage Dynamic Frequency	18 W 43 W <0.5 W <0.3 W Internal 90 VAC - 264 VAC 47 Hz - 63 Hz	Size Packed (mm) (inches) Size Unpacked with Stand Lowest Position (mm)	554 x 365 x 187 21.81" x 14.37" x 7.36" 489.7 x 251.9 x 375.8
SIGNAL INPUT		(inches) Highest Position	19.28" x 9.92" x 14.79"
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied Audio-Out	HDMI™ 1.4 + DisplayPort™ 1.2 + VGA HDMI™ (ROW) + DisplayPort™ + VGA + USB 3.0¹ 1.8 m Yes Yes Yes (3.5 mm)	(mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel	489.7 x 251.9 x 485.8 19.28" x 9.92" x 19.13" 489.7 x 43.5 x 315.1 19.28" x 1.71" x 12.41"
SIGNAL INTERFACE / PERFO	DRMANCE	Lowest Pixel at Bottom of Screen (mm / inches)	82.1 / 3.23"
Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/ Bandwidth Default Color Temperature Preset/User Modes OSD Buttons OSD Languages	30 kHz - 81 kHz 50 Hz - 75 Hz 1920 x 1080 VGA : 205 MHz HDMI™ : 165 MHz DisplayPort™ : 165 MHz 6500K 24/20 5+2 Buttons English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian	Highest Pixel at Top of Screen (mm / inches) Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only	192.1 / 7.56" 232 x 203.6 / 9.13" x 8.02" Starting at 14.46 lbs (6.56 kg) Starting at 10.16 lbs (4.61 kg) Starting at 6.48 lbs (2.94 kg)

MECHANICAL

Tilt Angle (Front / Back)	-5° / 30°
Swivel Angle (Left / Right)	+/-45°
Lift (mm)	Yes (110)
Pivot	+/-90°
VESA® Mount (mm)	Yes (100 x 100)
Kensington® Lock Slot	Yes
Cable Management	Yes
Bezel Color	Raven Black
Bezel Width	
Top (mm / inches)	2 / 0.08"
Bottom (mm / inches)	21.4 / 0.84"
Sides (mm / inches)	2 / 0.08"

COMPLIANCE

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.













T2324d Wide Flat Panel Monitor Name

Bezel color **Black**

Type-model 60F3JAR2US / 60F3JAT2EU Panel TFT-LCD, twisted nematic (TN), White LED backlight

Viewable image size

23.0" (**584mm**) diagonal 20.07" x 11.29" (509.8mm x 286.7mm) Max view area (W x H)

1920x1080 Native resolution

Aspect ratio 16:9

Pixel pitch (mm)
Dot/Pixel per Inch 0.2655 x 0.2655 mm 96 dpi

Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 5ms (typical)

Color gamut 72%

Viewing angle at 10:1 CR

170° (+/- 85°) horizontal, 160° (+/- 80°) vertical Tilt stand

Stand Bezel width

Sides: 0.68" (17.3mm) 15.75" H x 21.48" W x 8.06" D; Dimensions (HxWxD)

400.3mm H x 545.8mm W x 204.9mm D

Power supply 20 watts typical, 27 watts maximum

<0.3 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty

7.06 lb; 3.20 kg
3 year (includes backlight)
June 2016

Available date

VESA-compliant VESA DDC2B/CI ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Gold rating** Environmental

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768

WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080

Presets / user settings Standard presets: 26; user settings: 16

Tilt: 22° back, -5° Viewing adjustments

Rotating screen None

On screen display

Control features USB hub

On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, dual input and brightness

None

Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

Monitor connectors

Signal cables

Dual input (two different PCs attach to two different connectors; one PC shows image; select via b (1) VGA 15-pin D-shell, analog, blue (2) DisplayPort, digital, black, **HDCP-compliant** (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features

Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group

1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 73P2582 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features Widescreen 23.0-inch monitor

• Supports 1920x1080 resolution

· Supports optional soundbar

Supports ThinkCentre Tiny via VESA back mount

 Includes dual input connection for attachment to two systems concurrently (analog and digital)

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



Lenovo July 2016













Name T23d-10 Wide Flat Panel Monitor Bezel color **Black** Type-model 61C3MAR6US / 61C3MAT6EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **22.5**" (**571.5mm**) diagonal 19.5" x 12.4" (496.2mm x 313.9mm) Viewable image size Max view area (W x H) 1920x1200 Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.25 x 0.25 mm Dot/Pixel per Inch 100.6 dpi Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical) Color gamut 12% (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.09" (2.3mm) 19.37" H x 19.73" W x 9.9" D; 491.9mm H x 501.2mm W x 251.9mm D Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) 15 watts typical, 18 watts maximum, Power supply <0.3 watts standby/suspend, universal, integrated (no external brick-like power supply) Weight Limited warranty 10.67 lb; 4.85 kg

3 year (includes backlight) June 2018 Available date VESA-compliant VESA DDC2B/CI ENERGY STAR® qualified Power management ISO 9241-307 Ergonomics Emission standards FCC Class B TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental Preset resolutions VGA: 640x480, 720x400 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080

1920x1200

Features

- Widescreen 22.5-inch monitorSupports 1920x1200 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- Supports optional soundbar
- Includes dual input connection for attachment to two systems concurrently
- EPEAT Gold certified
- Microsoft® Windows® 7 certified
- Microsoft Windows 10 certified



ThinkVision T23d-10 Wide Monitor

Presets display modes Standard presets: 27; user settings: 20 Viewing adjustments Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait Rotating screen On screen display On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for power, menu, input source select and brightness USB hub None Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Monitor connectors Signal cables (1) detachable, VGA 15-pin D-shell at each end, alratog, 1.5 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features Security Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group 1.8 meter black power cord, 1.8 meter HDMI signal cable (NA only)

Limited Warranty	Accessories	
	See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281	Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620
		See details at www.lenovo.com/support/monitoraccessories
		See all monitors at www.lenovo.com/thinkvision

WUXGA:













T23i Wide Flat Panel Monitor Name Bezel color **Black**

Type-model 61ABMAR1US / 61ABMAT1EU Panel White LED backlight

Viewable image size Max view area (W x H)

Native resolution Aspect ratio Pixel pitch (mm)

Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Control features USB hub

TFT-LCD, In-Plane Switching (IPS),

23" (584.2mm) diagonal 20.36" x 11.92" (517.2mm x 302.8mm) 1920x1080

16:9 0.2652 x 0.2652 mm

95.8 dpi 250 nits or cd/m2 (typical)

1000:1 (typical) 6ms (typical)

178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 13.3" H x 20.56" W x 10.4" D; 337.7mm H x 522.2mm W x 264.2mm D

16 watts typical, 45 watts maximum (with USB 3.0 hub), <0.5 watts standby/suspend, universal,

integrated (no external brick-like power supply) 10.85 lb; 4.92 kg 3 year (includes backlight)

Available date April 2017

VESA-compliant VESA DDC2B/CI

Power management ENERGY STAR® qualified

Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ SILVER rating** Environmental

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080

Presets display modes HDMI: 18; DP: 18 **Features**

 Widescreen 23-inch monitor • Supports 1920x1080 resolution

Supports ThinkCentre Tiny Clamp Bracket

 Includes dual input connection for attachment to two systems concurrently

ÉPEAT Silver certifiéd

Microsoft® Windows® 7 certified
 Microsoft Windows 10 certified



ThinkVision T23i Wide Monitor

Viewing adjustments Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait Rotating screen On screen display

On screen display with digital user controls (8 languages)

Direct access (buttons on front) for power, menu, input source select and brightness and automatic image setup USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)

Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

Multiple input Monitor connectors

(1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Signal cables

(1) detachable, VGA 13-pin b-shell at each end, digital, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter
(3) detachable, HDMI at each end, digital, 1.8 meter (NA)

Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount

Mounting features

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group

1.8 meter HDMI signal cable(NA), 1.8 meter USB signal cable, 1.8 meter black power cord

Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision













T2454p Wide Flat Panel Monitor Name Bezel color Raven black 60F9MAR1US / 60F9MAT1EU Type-model Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **24.0"** (**609.6mm**) diagonal 20.41" x 12.76" (518.4mm x 324.0mm) **1920x1200** Viewable image size Max view area (W x H) Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.270 x 0.270 mm 94 dpi

300 nits or cd/m2 (typical)

24 watts typical, 27 watts maximum (without USB 3.0 hub), 54 watts maximum (with USB 3.0 hub), <0.5 watts standby/suspend, universal,

integrated (no external brick-like power supply)

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™** Gold rating

640x350, 640x480, 720x400

1680x1050, 1600x1200

1920x1080, 1920x1200

Screen pivots 90 degrees from landscape to portrait

Standard presets: 21; user settings: 20

1280x720, 1280x768, 1280x800

Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand

(1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter

On screen display with digital user controls (8 languages)
Direct access (buttons on front) for automatic image setup, dual input and brightness

USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)

Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

(2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

1000:1 (typical)

13.60 lb; 6.15 kg

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307

FCC Class B

VGA:

XGA:

SVGA:

SXGA:

WXGA:

WXGA+:

Full HD:

WSXGA+:

March 2015

3 year (includes backlight)

800x600

1024x768

1440x900

1280x1024

7ms (typical)

77.4%

Dot/Pixel per Inch Brightness Contrast ratio Pixel response time

Color gamut Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.74" (18.8mm) 15.85" H x 21.94" W x 10.39" D; 402.5mm H x 557.4mm W x 264.2mm D Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date VESA-compliant Power management

Ergonomics

Emission standards Environmental

Preset resolutions

Presets / user settings

Viewing adjustments Rotating screen On screen display Control features

USB hub Multiple input Monitor connectors

Signal cables

Mounting features Security Ship group

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Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/de-

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DisplayPort cable, 1.8 meter USB signal cable, 1.8 meter black power cord

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

- Widescreen 24.0-inch monitor • Supports 1920x1200 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- Supports optional soundbar
- Includes dual input connection for attachment to two systems concurrently (analog and digital)
- EPEAT Gold certified
- Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified
- Microsoft Windows 10 certified



ThinkVision T2454p Wide Monitor

73P2582

45K1620













ThinkVision T24d-10 MONITOR

SPECIFICATIONS

DISPLAY		DIMENSIONS (W x D x H)	
Panel Size Panel Type Resolution Backlight Aspect Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DPI/PPI) Anti-Glare Screen Dimensions (W x H) (mm) (inches) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Color Gamut (CIE 1931) Display Colors (Typical) Response Time Extreme Typical Off	24" In-Plane Switching 1920 x 1200 WLED 16:10 0.27 x 0.27 94 PPI Yes 518.4 x 324 20.41" x 12.75" 300 cd/m² 178°/178° 1000:1 3M:1 99% sRGB 16.7 Million 4 ms 7 ms 15 ms	Size Packed (mm) (inches) Size Unpacked with Stand (mm) (inches) Size Monitor Head Only (mm) (inches) Distance from Table to Panel Lowest Pixel at Bottom of Screen (mm / inches) Highest Pixel at Top of Screen (mm / inches) Stand Base Footprint Area (mm) (inches) Weight Packed Unpacked Monitor Head Only	160 x 655 x 422 6.3" x 25.79" x 16.61" 533.2 x 260.4 x 497.4 20.99" x 10.25" x 19.58" 533.2 x 42.3 x 355.1 20.99" x 1.67" x 13.98" 56 / 2.2" 490 / 19.29" 250 x 250 9.84" x 9.84" Starting at 19.18 lbs (8.7 kg) Starting at 12.41 lbs (5.63 kg) Starting at 8.77 lbs (3.98 kg)
SIGNAL INPUT		POWER CONSUMPTION	

SIGNAL INPUT

Horizontal Ereguency

Video Input Signals	VGA + DisplayPort [™] 1.2 + HDMI [™] 1.4
Video Cables Supplied	VGA + DisplayPort™ + HDMI™*
Video Cable Length	1.8 m
USB Hub	USB 3.01
USB Cable Supplied	Yes
Audio-Out	Yes (3.5 mm)

30 kHz - 83 kHz

Typical	22 W
Maximum	64 W
Sleep-Mode	<0.3 W
Switch Off-Mode	<0.3 W
Power Supply	Internal
Power Voltage	100 VAC - 240 VAC
Voltage Dynamic Frequency	50 Hz - 60 Hz

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency	30 KHZ - 83 KHZ
Vertical Frequency	50 Hz - 75 Hz
Native Resolution	1920 x 1200
Maximum Pixel Clock Speed/	
Bandwidth	
VGA	205 MHz
HDMI™	165 MHz
DisplayPort™	165 MHz
Default Color Temperature	6500 K
Preset Display Modes	20
OSD Buttons	5
OSD Languages	English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian

ENVIRONMENTAL

Temperature Operating Non-Operating	0°C - 40°C -20°C - 60°C
Humidity	
Operating	10% - 80%
Non-Operating	5% - 95%
Altitude	
Operating	0 m - 5000 m
Non-Operating	0 ft - 40,000 ft
Arsenic-Free Glass	Yes
PVC-Free	Yes
Mercury-Free	Yes
PCC % of Plastic Resins	>85%

MECHANICAL

Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift (mm) Pivot VESA* Mount (mm x mm) Cable Management Kensington* Lock Bezel Color Bezel Width Top (mm / inches) Bottom (mm / inches)	-5°/ 30° +/-45° 110 +/-90° 100 x 100 Yes Yes Business Black 2 / 0.08" 22.7 / 0.89"
Sides (mm / inches)	2 / 0.08"

COMPLIANCE

Warranty

Geography Availability

EPEAT™	Silver
ENERGY STAR® Rating	7.0
ULE	Gold
TCO®	TCO Display 7.0 / TCO Edge 2.0
RoHS (EU 2002/95/EC)	Yes
China Energy Efficiency Standard	Tier 2
Windows Certification	Windows 7 / Windows 10

3 Years

WW

WARRANTY AND AVAILABILITY

* NA only.

Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.





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ThinkVision T24i-10 MONITOR



SPECIFICATIONS

DISPLAY

Panel Size Panel Type Backlight Resolution (H x V) Aspect Ratio Anti-Glare Near Edgeless Screen Screen Dimensions (W x H) (mm) (inches)

Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (mm) Color Gamut (CIE 1931) Color Support (Typical)

Response Time (gray to gray) OSD Controls Buttons Languages

23.8" Wide In-Plane Switchng

WI FD 1920 x 1080 16:9 Yes Yes

527.04 x 296.46 20 75" x 11 67' 250 cd/m² 178°/178° 1000:1 3M:1 0.2745 x 0.2745

72% NTSC 16.7 Million 4 ms (Extreme mode) 6 ms (Normal mode)

English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian

DIMENSIONS (W x D x H)

Size Packed (mm) 422 x 622 x 190 (inches) 16 61" x 24 48" x 7 48" Size Unpacked with Stand Lowest Position 540.2 x 261.75 x 373.4 (mm)

(inches) Highest Position 540.2 x 261.75 x 483.4 (mm)

Size Unpacked without Stand

(Monitor Head Only) (mm)

(inches) Stand Base Footprint Area

(mm) (inches) Weight Packed

(inches)

Unpacked Monitor Head Only Full Container Load (40' STD / 20' STD)

21.26" x 10.3" x 14.7"

540 2 x 46 45 x 325 98 21.26" x 1.82" x 12.83"

21.26" x 10.3" x 19"

250 x 250 9.84" x 9.84"

Starting at 16.39 lbs (7.45 kg) Starting at 11.33 lbs (5.15 kg) Starting at 7.26 lbs (3.3 kg) 1140 / 540 Units

CONNECTIVITY

VGA + HDMI™ 1.4 + Video Input Signals DisplayPort™ 1.2 Video Cables Supplied (Length) 1.8 m

1 x USB 3.01 (Upstream) USB Hub 4 x USB 3.01

(Downstream, Incl. 1 BC) . Yes (3.5 mm)

Audio Out

POWER CONSUMPTION

16.5 W Typical Maximum 55 W <0.5 W Sleep-Mode Switch Off-Mode <0.3 W Power Supply Internal

Power Voltage 90 VAC - 264 VAC

MECHANICAL

-5°/ 30° Tilt Angle (Front / Back) Swivel Angle (Left / Right) +/-45° Lift Range (mm) 110 +/-90° Pivot Cable Management Yes Kensington® Lock Yes VESA® Mount (mm x mm) Yes (100 X 100)

Bezel Color Raven Black

Bezel Width

Top (mm / inches) 2 / 0.08" Sides (mm / inches) 2 / 0.08"

WHAT'S IN THE BOX Monitor with Stand

1 x Power Cable 1 x VGA Cable 1 x DisplayPort™ - DisplayPort™ Cable 1 x HDMI™ Cable (NA Only) Quick Setup Guide

CERTIFICATIONS

EPEAT™ Silver ENERGY STAR® Rating 7.1 TCO[®] 7.0 TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2

Windows Certification Windows 7 / Windows 10 TüV Eye Comfort Certification

Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.

















ThinkVision T24i-19 MONITOR



SPECIFICATIONS

DISPLAY

Panel Size
Panel Type
Backlight
Resolution
Aspect Ratio
Anti-Glare
Near Edgeless Screen
Screen Dimensions (W x H)

(mm) (inches) Brightness Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical)

Dynamic Contrast Ratio Speakers Pixel Pitch (mm) Color Gamut (CIE 1931) Color Depth

Color Support (Typical) Response Time (GtG) Extreme / Normal OSD Controls

Buttons Languages

In-Plane-Switching WLED

23.8" Wide

FHD (1920 x 1080)

16:9 Yes Yes

> 527.04 x 296.46 20.75" x 11.67" 250 nits 178°/178° 1000:1 3M:1 2 x 2W 0.2745 x 0.2745 72% NTSC 8 bit 16.7 Million

4 ms / 6 ms

5

English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian

DIMENSIONS (W x D

 Size Packed

 (mm)
 422 x 622 x 190

 (inches)
 16.61" x 24.48" x 7.48"

 Size Unpacked with Stand

Lowest Position
(mm)

(inches) Highest Position

(mm)

(inches) Size Unpacked without Stand

(Monitor Head Only)
(mm)

Stand Base Footprint Area

(mm) (inches) Weight Packed

(inches)

Unpacked Monitor Head Only Full Container Load (40' STD / 20' STD) 540.2 x 261.75 x 373.4 21.26" x 10.3" x 14.7"

540.2 x 261.75 x 483.4 21.26" x 10.3" x 19"

540.2 x 46.45 x 325.98 21.26" x 1.82" x 12.83"

250 x 250 9.84" x 9.84"

Starting at 16.39 lbs (7.45 kg) Starting at 11.33 lbs (5.15 kg) Starting at 7.26 lbs (3.3 kg)

1140 / 540 Units

CONNECTIVITY

 Video Input Signals
 VGA + HDMI™ + DisplayPort™

 Video Cables Supplied
 VGA, DisplayPort™, USB, Power, HDMI™ (for NA only)

 USB Hub
 USB 3.0¹ (4 x down, 1 x BC)

 Audio Out
 Yes (3.5 mm)

 Power
 Internal

 Soundbar Support*
 Yes

MECHANICAL

Tilt Angle (Front / Back) -5°/ 30° Swivel Angle (Left / Right) +/-45° 110 Lift Range (mm) +/-90° Pivot LTPS Stand Cable Management Yes Kensington® Lock Yes VESA® Mount (mm x mm) Yes (100 X 100) Bezel Color Raven Black Bezel Width 2 / 0.08" Top (mm / inches) Sides (mm / inches) 2 / 0.08"

POWER CONSUMPTION

 Typical
 16.5 W

 Maximum
 59 W

 Sleep-Mode
 <0.5 W</td>

 Switch Off-Mode
 <0.3 W</td>

 Power Supply
 Internal

 Power Voltage
 90 VAC - 264 VAC

 $\begin{array}{lll} {\sf ENERGY\,STAR^*\,(P_{on})} & 13.67\,\,{\sf W} \\ {\sf ENERGY\,STAR^*\,(E_{\sf TEC})} & 43.51\,\,{\sf kWh} \end{array}$

WHAT'S IN THE BOX

Monitor with Stand
1 x Power Cable
1 x VGA Cable
1 x DisplayPort™ - DisplayPort™ Cable
1 x HDMI™ Cable (NA Only)
Quick Setup Guide

CERTIFICATIONS

EPEAT™ Silver **ENERGY STAR® Rating** 7.1 7.0 TCO® TCO Edge 2.0 ULF Yes RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2 Windows Certification Windows 7 / Windows 10

TüV Eye Comfort Certification Yes
TINY Support Yes





Optional.

Depending on many factors such as the processing capability of peripheral devices, file attributes and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.













Name T24m Wide Flat Panel Monitor **Features** Bezel color **Black** • Widescreen 23.8-inch monitor 61B8RAR3US / 61B8RAT3EU Type-model • Supports 1920x1080 resolution Panel TFT-LCD, In-Plane Switching (IPS), Supports ThinkCentre Tiny Clamp Bracket White LED backlight Supports optional soundbarEPEAT Gold certified **23.8"** (**604.7mm**) diagonal 20.75" x 11.67" (527.04mm x 296.46mm) **1920x1080** Viewable image size Max view area (W x H) Microsoft® Windows® 7 certified Native resolution Microsoft Windows 10 certified Aspect ratio 16:9 0.2745 x 0.2745 mm Pixel pitch (mm) Dot/Pixel per Inch 92 dpi Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical) Color gamut 99% sRGB Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 19.03" H x 21.26" W x 10.3" D; 483.4mm H x 540.2mm W x 261.75mm D Stand Bezel width Dimensions (HxWxD) 17 watts typical, 110 watts maximum (with USB 3.0 hub), Power supply <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 12.34 lb; 5.6 kg

3 year (includes backlight)
August 2017 Weight Limited warranty Available date VESA DDC2B/CI VESA-compliant ENERGY STAR® qualified Power management ISO 9241-307 Ergonomics Emission standards FCC Class B TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental Preset resolutions VGA: 640x480 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 1680v1050



Presets display modes	Full HD: 1920x1080,1920x1200 HDMI: 19; DP: 11	ThinkVision T24m Wide Monitor	
Viewing adjustments Rotating screen	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait		
On screen display Control features USB hub	On screen display with digital user controls (8 languages) Direct access (buttons on front) for power, menu, input source select and brightness USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)		
Multimedia Multiple input Monitor connectors	Audio-out, optional sound bar supported Support HDMI, DisplayPort, USB 3.1 Type-C (1) HDMI (1.4), digital, HDCP-compliant		
	(2) DisplayPort (1.2), digital, HDCP-compliant (3) USB 3.1 Type-C		
Signal cables Mounting features Security	(1) 1.8 meter USB Type-C to USB Type-C cable Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)		
Ship group	Monitor with stand, Safety and Warranty Information, 1.8 meter USB Type-C to USB Type-C cable, 1.8 meter black power cord		

Limited Warranty	Accessories	
See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281	Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620	
	See details at www.lenovo.com/support/monitoraccessories	
	See all monitors at www.lenovo.com/thinkvision	













ThinkVision T24V-10 MONITOR

SPECIFICATIONS

DISPLAY		ENVIRONMENTAL	
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare	23.8" In-Plane Switching WLED 1920 x 1080 16:9 Yes	Temperature Operating Non-Operating Humidity Operating	0°C - 40°C -20°C - 60°C 10% - 80%
creen Dimensions (W x H) (mm) 527.04 x 296.46 laximum Brightness (Typical) 250 cd/m² iewing Angle (H/V at CR 10:1) 178°/178° ontrast Ratio (Typical) 1000:1	Non-Operating Altitude Operating Non-Operating	5% - 95% 0 m - 8000 m 0 ft - 40,000 ft	
Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off)	3M:1 0.25 x 0.25 102 72% sRGB 4/6/14 ms (G-to-G)	Arsenic-Free Glass PVC-Free Mercury-Free PCC % of Plastic Resins	Yes Yes Yes >85%
POWER CONSUMPTION		DIMENSIONS (W x D x H)	
Typical Maximum Sleep-Mode Switch Off-Mode Power Supply Power Voltage	20 W 45 W <0.5 W <0.3 W Internal 90 VAC - 264 VAC	Size Packed (mm) (inches) Size Unpacked with Stand Lowest Position (mm)	608 x 395 x 187 23.94" x 15.55" x 7.36" 540.2 x 261.9 x 390.5
Voltage Dynamic Frequency	47 Hz - 63 Hz	(inches)	21.28" x 10.32" x 15.39"
SIGNAL INPUT Video Input Signals	HDMI™ 1.4 + DisplayPort™ 1.2 + VGA	Highest Position (mm) (inches)	540.2 × 261.9 × 500.5 21.28" × 10.32" × 19.72"
Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied Audio-Out	HDMI™ (ROW) + DisplayPort™ + VGA + USB 3.0¹ 1.8 m Yes Yes Yes (3.5 mm)	Size Unpacked without Stand (Monitor Head Only) (mm) 540.2 x 43.8 x 343.7 (inches) 21.27" x 1.72" x 13.53" Distance from Table to Panel	
SIGNAL INTERFACE / PERFO	DRMANCE	Lowest Pixel at Bottom of Screen (mm / inches)	69.6 / 2.74"
Horizontal Frequency Vertical Frequency Native Resolution	rtical Frequency 50 Hz - 75 Hz tive Resolution 1920 x 1080 ximum Pixel Clock Speed/ VGA : 205 MHz	Highest Pixel at Top of Screen (mm / inches) Stand Base Footprint Area	69.6 / 2.74"
Maximum Pixel Clock Speed/ Bandwidth		(mm / inches) Weight	242.5 x 212.8 / 9.55" x 8.38"
Default Color Temperature Preset/User Modes OSD Buttons OSD Languages	6500K 27/21 5+2 Buttons English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian	Packed Unpacked Monitor Head Only	Starting at 15.78 lbs (7.16 kg) Starting at 11.18 lbs (5.07 kg) Starting at 7.3 lbs (3.31 kg)
MECHANICAL		COMPLIANCE	

Tilt Angle (Front / Back) Swivel Angle (Left / Right)	-5° / 30° +/-45° Yes (110)	
Lift (mm) Pivot	+/-90°	
VESA® Mount (mm)	Yes (100 x 100)	
Kensington® Lock Slot	Yes	
Cable Management	Yes	
Bezel Color	Raven Black	
Bezel Width		
Top (mm / inches)	2 / 0.08"	
Bottom (mm / inches)	22 / 0.87"	
Sides (mm / inches)	2 / 0.08"	

EPEAT™ Silver **ENERGY STAR® Rating** 7.0 Gold ULE TCO® TCO Display 7.0 / TCO Edge 2.0 RoHS (EU 2002/95/EC) Windows Certification Windows 7 / Windows 10 China Energy Efficiency Standard Grade 2 TÜV Eye Comfort Yes

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the dar ates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.













X24 Pro Wide Flat Panel Monitor Name

Bezel color **Black**

60E4ECR1US / 60E4ECT1US / 60E4ECT1EU Type-model

Panel TFT-LCD, AH-IPS (In-Plane Switching),

White LED backlight Viewable image size

23.8" (**604.5mm**) diagonal 20.75" x 11.67" (527.0mm x 296.5mm) **1920x1080** Max view area (W x H)

Native resolution

Aspect ratio 16:9 Pixel pitch (mm) 0.2745 x 0.2745 mm

Dot/Pixel per Inch 92 dpi

Brightness 250 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 7ms (typical)

Color gamut 72%

Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical

Stand Tilt stànd

Bezel width

Dimensions (HxWxD)

Sides: 0.09" (2.3mm) 17.61" H x 21.30" W x 9.39" D; 447.4mm H x 540.9mm W x 238.4mm D

20 watts typical, 90 watts maximum, Power supply

<0.5 watts standby/suspend, universal,

external power supply 9.26 lb; 4.20 kg 1 year (includes backlight)

Weight Limited warranty

July 2016 Available date

ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 6.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental

Preset resolutions 640x350, 640x480, 720x400 VGA:

SVGA: 800x600° XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768

WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050

Full HD: 1920x1080 Presets / user settings Standard presets: 16; user settings: 20

Viewing adjustments Tilt: 22° back, -5° forward

Rotating screen None

On screen display On screen display with digital user controls
Direct access (buttons on side bezel) for dual input and brightness
USB Hub: two USB 3.1 Type-C and one micro USB 3.0 ports Control features USB hub Integrated stereo speakers (3 watts x 2), bulit-in microphone Multimedia

RealSense 3D camera SR300 Camera

mealsense 3D camera SR300

Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)
(1) mDP, Mini DisplayPort, digital, **HDCP-compliant**(2) USB Type-C, digital
(1) detachable, mDP to DP, digital, 2.0 meter
(2) DP to mDP adapter
(3) Micro USB 3.0 cable Multiple input

Monitor connectors

Signal cables

Mounting features None

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Monitor with stand, Safety and Warranty Information, ThinkPad 90W Square tip power adaptor, 2.0 meter Mini DisplayPort to DisplayPort signal cable (with DP to mDP adapter), Ship group

Micro USB 3.0 cable (for using camera)

Limited Warranty Accessories

See details at http://support.lenovo.com/en_US/guides-and-manuals/de-

tail.page?DocID=UM008281

Kensington MicroSaver Cable Lock

73P2582 Kensington Twin Head Cable Lock 45K1620

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 23.8-inch monitor • Supports 1920x1080 resolution

 Includes dual input connection for attachment to two systems concurrently

EPEAT Silver certified

• Intel RealSense 3D camera • Stereo speakers 3 watts x 2

One cable docking through USB 3.1 Type C

with power delivery

• Windows Hello certified

Microsoft® Windows® 10 certified



ThinkVision X24 Pro Wide Monitor

Lenovo July 2017

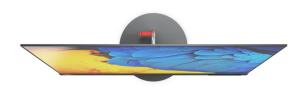












Lenovo ThinkVision X24-20

X24-20 Flat Panel Monitor Name **Features** Bezel color Raven black Widescreen 23.8-inch monitor 61BDGAR3US / 61BDGAT3EU Type-model • Supports 1920x1080 resolution Panel TFT-LCD, IPS (In-Plane Switching), • Includes dual input connection for attachment to two White LED backlight 23.8" (604.5mm) diagonal 20.75" x 11.67" (527.0mm x 296.5mm) 1920x1080 systems concurrently Viewable image size EPEAT Silver certified Max view area (W x H) • Microsoft® Windows® 7 certified Native resolution Microsoft Windows 10 certified Aspect ratio 16:9 Pixel pitch (mm) 0.2745 x 0.2745 mm Dot/Pixel per Inch 92 dpi Brightness 250 nits or cd/m² (typical) Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical) 72% (NTSC) 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Color gamut Viewing angle at 10:1 CR Tilt stand Stand Sides: 0.04" (1.1mm) 12.85" H x 21.16" W x 8.66" D; 326.4mm H x 537.4mm W x 220mm D Bezel width Dimensions (HxWxD) 20 watts typical, 25 watts maximum, Power supply 25 watts maximum, <0.5 watts standby/suspend, universal, external power supply 7.3 lb; 3.3 kg 3 year (includes backlight) December 2017 Weight Limited warranty Available date ENERGY STAR® qualified Power management Ergonomics ISO 9241-307 Emission standards FCC Class B TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental Preset resolutions 640x350, 640x480, 720x400 VGA: SVGA: 800x600° XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080 Presets / user settings Standard presets: 18; ThinkVision X24-20 Monitor user settings: 0 Viewing adjustments Tilt: 30° back, -5° forward

Rotating screen

On screen display with digital user controls (8 languages) On screen display

Control features Direct access (buttons on side bezel) for power, dual input and brightness

USB hub None

Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)

(1) HDMI (1.4a), digital, **HDCP-compliant**(2) DisplayPort, digital, black, **HDCP-compliant**(1) detachable, HDMI at each end, digital, 1.8 meter None Monitor connectors

Signal cables Mounting features

Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Ship group Monitor with stand, Safety and Warranty Information, 1.8 meter HDMI signal cable,

1.8 meter black power cord

Limited Warranty See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281	Accessories	
	Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620	
	See details at www.lenovo.com/support/monitoraccessories See all monitors at www.lenovo.com/thinkvision	













Lenovo ThinkVision P27h

P27h Wide Flat Panel Monitor Name

Case color **Black**

61AFGAR1US / 61AFGAT1EU Type-model

Panel TFT-LCD, IPS (In-Plane Switching), White LED

backlight

Viewable image size

27" (**685.8mm**) diagonal 23.49" x 13.21" (596.7mm x 335.7mm) **2560x1440** Max view area (W x H)

Optimum resolution Max pixel rate 300MHz Aspect ratio 16:9

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

Brightness 350 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 4ms (extreme) / 6ms (typical) Color gamut 99% sRGB

Viewing angle at 10:1 CR

178° horizontal, 178° vertical Stand

Bezel width **Dimensions**

Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 20.21" H x 24.08" W x 10.62" D; 513mm H x 611.6mm W x 269.8mm D (HxWxD, including stand) 38 watts typical, 140 watts maximum (with USB), Power supply

<0.5 watts sleep/off;

<0.5 watts switch off

integrated (no external brick-like power supply) 15.43 lb; 7.0kg (including stand)

Weight Limited warranty 3 year April 2017 Available date

VESA-compliant Power management Ergonomics Emission standards

Environmental

VESA DDC2B/CI **ENERGY STAR® 7.0** ISO 9241-307 FCC Class B

TCO Displays 7.0, RoHS, **EPEAT™ Silver rating**,

ULE Gold

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 1024x768 XGA: SXGA: 1280x1024 WXGA: 1366x768

1440x900, 1680x900 WXGA+: WSXGA+: 1680x1050

Full HD: 1920x1080, 1920x1200 QHD: 2560x1440

Presets display modes HDMI: 22; DP: 14

> Tilt: 30° back, -5° forward; lift: 4.33" (110mm); swivel: +/-45° Screen pivots 90 degrees from landscape to portrait On screen display with digital user controls (8 languages)

On screen display Direct access (buttons on front) for power, menu, input source select and brightness USB Hub: one USB 3.1 Type-C upstream port, four USB 3.0 Type-A downstream ports Audio-out, optional sound bar supported Control features USB hub

Multimedia

Camera

Viewing adjustments Rotating screen

Multiple input

Support HDMI, DisplayPort, USB 3.1 Type-C, DisplayPort-out (1) 2*HDMI (1.4), digital, **HDCP-compliant** (2) DisplayPort (1.2), digital, **HDCP-compliant** (3) DisplayPort-out, digital Monitor connectors

(4) USB 3.1 Type-C (1) USB 3.1 Type-C cable, 1.8 meter Signal cables Mounting features

Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

Ship group Monitor, detachable stand, Quick start and safety poster, 1.8 meter USB 3.1 Type-C cable,

1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en US/quides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620 Lenovo Security Cable Lock 57Y4303

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

 27-inch IPS LED backlit monitor • Supports 2560x1440 resolution • 5-Ports USB hub, support USB 3.0

 Supports optional soundbar Support ThinkCentre Tiny

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27h Monitor

Lenovo July 2017













Lenovo ThinkVision P27q

P27q Wide Flat Panel Monitor Name

Case color Black Type-model 61A8GAT1EU

Panel TFT-LCD, IPS (In-Plane Switching), White LED

backlight

Viewable image size

27" (**685.8mm**) diagonal 23.49" x 13.21" (596.7mm x 335.7mm) **2560x1440** Max view area (W x H)

Optimum resolution Max pixel rate 300MHz Aspect ratio 16:9

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

Brightness 350 nits or cd/m2 (typical)

Contrast ratio 1000:1 (typical) Pixel response time 4ms Color gamut 99% sRGB

Viewing angle at 10:1 CR 178° horizontal, 178° vertical

Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 20.21" H x 24.17" W x 10.62" D; Stand

Bezel width **Dimensions** 513mm H x 614mm W x 269.8mm D (HxWxD, including stand)

Power supply

38 watts typical, 75 watts maximum (with USB), <0.5 watts sleep/off; < 0.3 watts switch off

integrated (no external brick-like power supply)

15.43 lb; 7.0kg (including stand) Weight Limited warranty

3 year January 2017 Available date

VESA-compliant VESA DDC2B/CI Power management **ENERGY STAR® 7.0** Ergonomics ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, RoHS, **EPEAT™ Silver rating**, Environmental

ULE Gold

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 1024x768 XGA: SXGA: 1280x1024 WXGA: 1366x768

1440x900, 1600x900 WXGA+: WSXGA+: 1680x1050

1920x1080, 1920x1200 Full HD: QHD: 2560x1440

Presets / user settings Standard presets: 20; user settings: 24

Tilt: 30° back, -5° forward; lift: 4.33" (110mm); swivel: +/-45° Screen pivots 90 degrees from landscape to portrait Viewing adjustments Rotating screen On screen display On screen display with digital user controls (8 languages) Control features Direct access for menu, source switch, and brightness

USB hub USB Hub: one USB 3.0 upstream port, four USB 3.0 downstream ports

Multimedia Audio-out, optional sound bar supported

Camera

Support HDMI, DisplayPort, mini DisplayPort, DisplayPort-out Multiple input

Support HDMI, DisplayPort, mini DisplayPort, DisplayPort-out
(1) 2*HDMI (1.4), digital, **HDCP-compliant**(2) DisplayPort (1.2), digital, **HDCP-compliant**(3) Mini DisplayPort, digital, **HDCP-compliant**(1) detachable, mini DisplayPort to DisplayPort, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Monitor connectors

Signal cables

Mounting features Security

Monitor, detachable stand, Quick start and safety poster, 1.8 meter USB 3.0 cable, Ship group

1.8 meter mini DP to DP cable, 1.8 meter black power cord

Limited Warranty

See details at http://support.lenovo.com/en US/quides-and-manuals/detail.page?DocID=UM008281

Accessories

73P2582 Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 45K1620 Lenovo Security Cable Lock

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor

• Supports 2560x1440 resolution • 5-Ports USB hub, support USB 3.0

 Support ThinkCentre Tiny • Supports optional soundbar

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27q Monitor













Lenovo P27q-20

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

4-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 109

Viewing Angle (H x V @ CR 10:1)

178° / 178°

Response Time

4ms (extreme mode) 6ms (normal mode)

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

Color Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2 1 x DP 1.2 (out)

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB3.1 Gen1 (by USB Type-B)

USB Downstream

4 x USB3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

22W / 57W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

ENERGY STAR Power Consumption (P_{on}/E_{TEC})

18W / 57kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (Max range)

135 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 X 100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 2.0 mm

DIMENSION

Size Packed (D x H x W, mm/inch)

182.0 x 463.0 x 722.0 mm /

7.17 x 18.23 x 28.43 inches

Size Unpacked w/ Stand (D x H x W. mm/inch) (lowest position)

208.0 x 441.5 x 613.8 mm / 8.19 x 17.38 x 27.17 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position)

208.0 x 576.5 x 613.8 mm / 8.19 x 22.70 x 27.17 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch)

46.9 x 353.8 x 613.8 mm / 1.85 x 13.92 x 27.17 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 97.3 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm)

Weight Packed (kg/lbs.) 9.26 kg / 20.37 lbs.

Weight Unpacked (kg/lbs.)

7.12 kg / 15.7 lbs.

567.9 mm

Weight (monitor head only) (kg/lbs.)

4.64 kg / 10.23 lbs.

Full Container Load (40' STD / 20' STD)

792 / 352 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

1 x DP cable (1.8 m)

1 x USB Type-B to Type-A cable (1.8 m)

Quick setup guide

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO 8.0

TCO Edge

2.0

FPFAT

Silver

RoHS (EU 2002/95/EC)

Windows Certification

Windows 7. Windows 10

China Energy **Efficiency Standard**

Tier 1

TÜV Rheinland Eye Comfort

Yes













Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.1 Gen2 & 20 Gbit/s for USB 3.2.

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Lenovo ThinkVision P27u

P27u Wide Flat Panel Monitor Name **Features** Case color **Black** 27-inch IPS LED backlit monitor Type-model 61CBGAR1US / 61CBGAT1EU / 61CBGAR1EU / • Supports 3840x2160 resolution 61B0GAR1US / 61B0GAT1EU • 5-Ports USB hub, support USB 3.0 Panel TFT-LCD, IPS (In-Plane Switching), White LED Support ThinkCentre Tiny backlight 27" (684.7mm) diagonal • Supports optional soundbar Viewable image size Microsoft® Windows® 7 certified 23.49" x 13.21" (596.74mm x 335.66mm) 3840x2160 Max view area (W x H) Microsoft Windows 10 certified Optimum resolution Max pixel rate 600MHz Aspect ratio 16:9 Pixel pitch (mm) 0.1554 x 0.1554mm Dot/Pixel per Inch 163 dpi Brightness 350 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) 6ms (typical) 1.457 sRGB Pixel response time Color gamut Viewing angle at 10:1 CR 178° horizontal, 178° vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 20.21" H x 24.08" W x 10.62" D; 513.3mm H x 611.6mm W x 269.8mm D Stand Bezel width **Dimensions** (HxWxD, including stand) 513.3IIII H X 611.3IIIII W X 269 50 watts typical, 160 watts maximum (with USB), <0.5 watts sleep/off; <0.3 watts switch off Power supply integrated (no external brick-like power supply) 15.32 lb; 6.95kg (including stand) Weight 3 year Limited warranty August 2017 Available date **VESA-compliant** VESA DDC2B/CI ENERGY STAR® 7.0 ISO 9241-307 FCC Class B Power management Ergonomics Emission standards TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating**, ULE Gold Environmental Preset resolutions VGA: 640x480, 720x400, 720x480, 720x576 SVGA: 800x600 1024x768 XGA: SXGA: 1280x720, 1280x800, 1280x1024 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080, 1920x1200 QHD: 2560x1440 ThinkVision P27u Monitor UHD: 3840x2160 Standard presets: 27; user settings: 20 Presets / user settings Tilt: 30° back, -5° forward; lift: 4.33" (110mm); swivel: +/-45° Viewing adjustments Rotating screen Screen pivots 90 degrees from landscape to portrait On screen display On screen display with digital user controls (8 languages) Direct access (buttons on front) for power, menu, input source select and brightness USB Hub: one USB 3.1 Type-C port, four USB 3.0 Type-A downstream ports Audio-out, optional sound bar supported Control features USB hub Multimedia Camera Support HDMI, DisplayPort, USB 3.1 Type-C (1) 2*HDMI (2.0), digital, **HDCP-compliant** (2) DisplayPort (1.2), digital, **HDCP-compliant** Multiple input Monitor connectors

(3) USB 3.1 Type-C

Signal cables

(1) detachable, DisplayPort to DisplayPort, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features Security

Monitor, detachable stand, Quick start and safety poster, 1.8 meter USB Type-C to USB Type-C cable, 1.8 meter DP to DP cable, 1.8 meter HDMI to HDMI cable (NA only), 1.8 meter black power cord, Ship group

1.8 meter USB Type-C to USB Type-A cable

Limited Warranty	Accessories	
See details at http://support.lenovo.com/en_US/guides-and-manuals/detail.page?DocID=UM008281	Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock Lenovo Security Cable Lock See details at www.lenovo.com/support/mor	













ThinkVision® P32u-10 **SPECIFICATIONS**

DISPLAY

Panel Size 32 inches

Screen Dimensions (H x V) 708.48 x 398.52mm

Panel Type In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 3840 x 2160 pixels

Pixel Pitch (H x V) 0.1845 x 0.1845mm

Viewing Angle (H x V) 178°/178°

Response Time (gray to gray) 4ms (extreme mode) 6ms (normal mode)

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

Color Gamut 99.5% Adobe RGB, 100% sRGB, 100% BT.709, 98.2% DCI-P3, 79.3% BT.2020

Color Support 1.07 Billion

CONNECTIVITY

Video Input Signals 2 HDMI 2.0 + DP 1.2 + Thunderbolt™ 3 In + Thunderbolt™ 3 Out

Video Cable Length 2m for Thunderbolt™ 1.8m for HDMI & DP

Audio Out Yes (3.5mm)

USB Hub Yes 2 x USB 3.0 (Upstream, 1 by Thunderbolt[™] 3) 4 x USB 3.0 (Downstream, incl. 1BC)

Power Consumption <57W (Typical) / <190W (Max) at On mode <0.5W at Sleep mode < 0.3W at Switch off mode

DIMENSIONS

Size Packed (D x H x W) 844 x 228 x 528mm / 33.23 x 8.98 x 20.79 inches

Size Unpacked w/stand (D x H x W) (Lowest Position)

350.0 x 497.85 x 726.7mm/13.78 x 19.6 x 28.61 inches

Size Unpacked w/stand (D x H x W) (Highest Position)

350.0 x 607.85 x 726.7mm/13.78 x 23.93 x 28.61 inches

Size Unpacked w/o stand (D x H x W) (Head Only)

58.95 x 431.5 x 726.7mm/2.32 x 16.99 x 28.61 inches

WEIGHT

Weight Packed 14.30kg/31.32lbs.

Weight Unpacked 10.97kg/24.18lbs.

Weight (Monitor Head Only) 6.97kg/15.37lbs.

SPECIAL FEATURES

Factory Calibration

Yes

Anti-Glare Yes

PIP/PBP Yes

KVM switch Yes

Software

Yes (ThinkColor)

MECHANICAL

Tilt Angle (front/back)

Swivel Angle (left/right) -45°/+45°

Lift (Max range) 110mm

Pivot -90°/90°

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2mm

Bezel Width (top/bottom) 2.0/23.8mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable 1 x DP-DP cable 1 x HDMI cable 1 x USB 3.0 cable 1 x Thunderbolt™ 3 cable (20Gbps) 1 x CD (ThinkColor) Factory calibration report Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

EPEAT™ Silver

CCC Yes

RoHS Yes

ULE Gold

TCO 7.0

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 2

TÜV Eye Comfort Yes























pecifications

DISPLAY

Panel Size 43.4 inches

Screen Dimensions (H x V) 1052.3 x 328.8mm 41.4 x 12.9 inches

Panel Type VA NearEdgeless, anti-glare

Curvature 1800R

Backlight WLED

Aspect Ratio 32:10

Resolution 3840 x 1200

HDR

VESA Certified DisplayHDR™ 400

Pixel Pitch (H x V) 0.2740 x 0.2740mm

Viewing Angle (H x V) 178°/178°

Response Time (gray to gray) 4/6ms (extreme/typical)

Refresh Rate Max. 144Hz

Contrast Ratio (typical) 3000:1

Dynamic Contrast Ratio (typical)

Color Support (typical) 1.07B

Color Gamut sRGB: 99.5% BT.709: 99.5% DCI-P3: 90%

Brightness 380 nits (typical) 450 nits (peak)

CONNECTIVITY

Video Input Signals 2 x HDMI 2.0 1 x DP1.4 1 x USB Type-C Gen1 (DP1.2 Alt Mode) 1 x USB Type-C Gen2 (DP1.4 Alt Mode)

Video Cable Length 1.5m for USB Type-C Gen2 1.8m for others

Audio Out Yes (3.5mm)

USB Hub Yes

2 x USB 3.1 (1 x USB Type-C Gen1,

1 x USB Type-C Gen2) **USB Downstream** 4 x USB 3.1 Gen1 (1 BC)

Power Internal

Power Consumption Typical/Max: 70W/250W Switch-off Mode: <0.5W Sleep/Off Mode: <0.5W

DIMENSIONS

Size Packed (D x H x W) 1219 x 500 x 376mm 47.99 x 19.68 x 14.80 inches

Size Unpacked w/stand (D x H x W) (Lowest Position) 269.8 x 461.1 x 1058.3mm 10.62 x 18.15 x 41.67 inches

Size Unpacked w/stand (D x H x W) (Highest Position) 269.8 x 591.1 x 1058.3mm 10.62 x 23.27 x 41.67 inches

Size Unpacked w/o stand (D x H x W) (Head Only) 137.2 x 366.1 x 1058.3mm 5.40 x 14.21 x 41.67 inches

Weight Packed 18.59kg/40.98lbs.

Weight Unpacked 13.45kg/29.65lbs.

Weight (Monitor Head Only) 9.35kg/20.61lbs.

SPECIAL FEATURES

Anti-Glare Yes

PIP/PBP Yes

Software Yes (ThinkColor)

Speaker Supports optional Harman Kardon certified speaker

MECHANICAL

Tilt Angle (front/back) -5°/22°

Swivel Angle (left/right) ±30°

Lift (Max. range) Yes (130mm)

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2.4mm

Bezel Width (top/bottom) 2.4/25.6mm

WHAT'S IN THE BOX

Monitor with stand 1x Power cable 1 x HDMI cable 1 x DP cable 1 x USB Type-C Gen2 cable 1 x USB Type-C to Type-A cable Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

CCC Yes

RoHS Yes

Gold **TCO**

8.0

ULE

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 2

Ambient Operating Temperature 0°C to 45°C

TÜV Eye Comfort Yes









Windows



USB Upstream

*with FreeSync support graphic cards













ThinkVision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) x 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical)

3M:1

1000:1

Color Gamut NTSC (CIE 1931)

72%

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

Size Packed (D x H x W) (mm/inch)

132 x 455 x 715 mm / 5.20 x 17.91 x 28.15 inch

Size Unpacked w/stand (D x H x W) (mm/inch)

(Lowest Position)

220.0 x 443.5 x 611.9 mm / 8.66 x 17.46 x 24.10 inch

Size Unpacked w/stand (D x H x W) (mm/inch)

(Highest Position)

220.0 x 443.5 x 611.9 mm / 8.66 x 17.46 x 24.10 inch

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

46.2 x 366.5 x 611.9 mm / 1.82 x 14.43 x 24.10 inch

Weight Packed (kg/lbs.)

6.80kg / 14.99 lbs.

Weight Unpacked (kg/lbs.)

4.76kg / 10.49 lbs.

Weight (Monitor Head Only) (kg/lbs.)

4.22kg / 9.30 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Ye

(by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.68 mm

WHAT'S IN THE BOX

Monitor with stand

1x HDMI Cable

1 x VGA Cable (AP. EMEA only)

1x Power Cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

7.0

TCO

7.0

EPEAT™ Silver

ULE Gold

OOIC

RoHS Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

TÜV Eye Confort Certification

Yes



























ThinkVision S27q-10

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI)

109

Viewing Angle (H x V @ CR 10:1)

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

280 cd/m²

Brightness (peak)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

1.07 Billion

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1x Audio Port (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

35W / 45W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

Energystar Power Consumption (Pon/ETEC)

19 W / 59.6 kWh

Voltage Required

AC 100 to 240 VAC (50/60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 22 mm

DIMENSION

Size Packed (D x H x W, mm/inch)

132 x 455 x 715 mm / 5.20 x 17.91 x 28.15 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)

220 x 444.6 x 613.6 mm / 8.66 x 17.50 x 24.15 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position)

220 x 444.6 x 613.6 mm / 8.66 x 17.50 x 24.15 inches

Size Unpacked w/o Stand (D x H x W, mm/inch) (head only)

42 x 367.6 x 613.6 mm / 1.65 x 14.47 x 24.15 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 99 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 4422 mm

Weight Packed (kg/lb) 6.36 kg / 14.02 lbs.

Weight Unpacked (kg/lb)

4.65 kg / 10.25 lbs.

Weight (monitor head only) (kg/lb)

4.10 kg / 9.04 lbs.

Full Container Load (40' STD / 20' STD)

1088 / 544 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x HDMI cable (1.8 m)

Quick setup guide

CERTIFICATION

ENERGY STAR® Rating 8.0

CCC

Yes

TCO 8.0

.

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Window 7, Window 10

China Energy Efficiency Standard

Tier 1

TÜV Eye Comfort

Yes











Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.2 Gen2 & 20 Gbit/s for USB 3.2.

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Think Vision T25d-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

533.45 x 338.76mm

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Refresh Rate

60Hz

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

4ms (extreme mode) 6ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16.7M

CONNECTIVITY

Video Input Signals HDMI 1.4 + DP 1.2 + VGA

Video Cables Supplied

DP + HDMI*

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC

Audio Out

Yes (3.5mm)

POWER

Power Consumption (Typical/Max)

25W/66W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

16.54W

ENERGY STAR® (E_{тес}) 52.06kWh

Voltage Required

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

706 x 450 x 160mm/ 27.79 x 17.72 x 6.30 inches

Size Unpacked w/stand (D x H x W)(mm/inch) (Lowest position)

260.4 x 399.5 x 548.7mm/ 10.25 x 15.73 x 21.60 inches

Size Unpacked w/stand (D x H x W)(mm/inch) (Highest position)

260.4 x 509.5 x 548.7mm/ 10.25 x 20.06 x 21.60 inches

Size Unpacked w/o stand (D x H x W)(mm/inch) (Head Only)

43.0 x 369.1 x 548.7mm/ 1.69 x 14.53 x 21.60 inches

Weight Packed

7.8kg/17.20lbs.

Weight Unpacked

5.5kg/12.13lbs.

Weight (Monitor Head Only) 3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Optional Soundbar Support

Yes

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift Yes (110mm)

Pivot

+/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington™ Lock Slot

Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand

1 × Power Cable

1 × USB 3.1 Gen1 Cable

1 × HDMI™ Cable*

1 × DP Cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

EU RoHS

Yes

7.1

CCC Yes

TCO

TCO 8.0/TCO Edge 2.0

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

ULE Gold















*For NA and LA only

Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1: 10 Gbit/s for USB 3.1 Gen2 & 20 Gbit/s for USB 3.2.

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Think Vision T25m-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

535 45 x 338 76mm

Panel Type

In-Plane Switching

Backlight

WIFD

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

4ms (extreme mode) 6ms (normal mode)

Contrast Ratio (typical)

1000.1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16 7M

CONNECTIVITY

Video Input Signals

HDMI 1.4 + DP 1.2 + USB 3.1 Type-C™ (DP 1.2 Alt Mode)

Video Cables Supplied

USB 3.1 Type-C™

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C™)

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

POWFR

Power Consumption (Typical/Max)

30W/150W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

< 0.3 W

Power Supply

Internal

ENERGY STAR® (P.,.)

17.05W

ENERGY STAR® (ETEC)

63.12kWh

Power Voltage

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

706 x 450 x 160mm/ 27.79 x 17.72 x 6.30 inches

Size Unpacked w/stand (D x H x W) (mm/inch) (Lowest position)

260.4 x 399.5 x 548.7mm/ 10.25 x 15.73 x 21.60 inches

Size Unpacked w/stand (D x H x W) (mm/inch) (Highest position)

260.4 x 509.5 x 548.7mm/ 10.25 x 20.06 x 21.60 inches

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

43.0 x 369.1 x 548.7mm/ 1.69 x 14.53 x 21.60 inches

Weight Packed

7.8kg/17.20lbs.

Weight Unpacked 5.5kg/12.13lbs.

Weight (Monitor Head Only)

3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Smart Power*

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

Internal Speakers

Yes $(3W \times 2)$

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot

+/-90°

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand 1 × Power Cable

1 × USB Type-C[™] to Type-C[™] cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

7.1

EU RoHS

Yes CCC

Yes

TCO

TCO 8.0/TCO Edge 2.0

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

ULE Gold













*The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to other devices. 75W power delivery by USB Type-C can be achieved when downstream USB ports

Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.1 Gen2 & 20 Gbit/s for USB 3.2.

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are not connected and OSD brightness setting is <31.













DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLFD

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4 + DP 1.2

USB Hub

Yes

1 x USB 3.0 (Upstream)

4 x USB 3.0 (Downstream, incl. 1BC)

Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

Power Consumption

22W (Typical) / 58W (max) at On mode: < 0.5W at Sleep mode; < 0.3W at Switch off mode

MULTI-MEDIA

Optional Soundbar Support

DIMENSIONS

Size Packed (D x H x W) (mm/inch)

187 x 455 x 715 mm / 7.362 x 17.913 x 28.15 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Lowest Position)

269.8 x 403.3 x 611.9 mm / 10.62 x 15.88 x 24.09 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Highest Position)

269.8 x 513.3 x 611.9 mm / 10.62 x 20.21 x 24.09 inch

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

49.9 x 366.5 x 611.9 mm / 1.96 x 14.43 x 24.09 inch

Weight Packed (kg/lbs.)

9.32kg / 20.55 lbs.

Weight Unpacked (kg/lbs.)

6.55kg / 14.44 lbs.

Weight (Monitor Head Only) (kg/lbs.)

4.60kg / 10.14 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tinv)

(by Tiny Clamp Bracket Kit+VESA mount PN:4XF0N82412+

PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

-45°/+45°

Lift (Max range)

110 mm

Pivot

-90°/90°

VESA Mount

Yes (100 mm)

Kensington[™] Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x VGA cable

1 x DP-DP cable

1 x HDMI cable (NA only)

1 x USB 3.0 cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

TCO

7.0

EPEAT™ Silver

ULE

Gold

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Eye Comfort Certification

Yes













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ThinkVision T27p-10

DISPLAY

Panel Size

27.0 inches

Screen Dimensions (H x V) 596.74 x 335.66mm

Panel Type

In-Plane Switching

Backlight WLED

Aspect Ratio

16:9

Resolution

3840 x 2160 pixels

Pixel Pitch (H x V) 0.1554 x 0.1554mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

4ms (extreme mode) 6ms (normal mode)

Refresh Rate

60Hz

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

350 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support 1.07 Billion

POWER

Power Consumption (Typical/Max) 50W/140W

Power Consumption Sleep/Off Mode <0.5W

Power Consumption

Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

23.40W

ENERGY STAR® (E_{TEC})

101.94kWh

Voltage Required 100-240VAC (50/60Hz)

CONNECTIVITY

Video Input Signals

HDMI 2.0 + DP 1.2 + USB 3.1 Type-C™ (DP 1.2 Alt Mode)

Video Cables Supplied

USB 3.1 Type-C™ + HDMI

Video Cable Length 1.8m

USB Hub

Yes

1 x USB 3.1 Gen1 (by USB Type-C™)

USB Downstream

USB Upstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

DIMENSIONS

Size Packed (D x H x W)

732 x 210 x 453mm/ 28.82 x 8.27 x 17.83 inches

Size Unpacked w/stand (D x H x W) (mm/inch)

269.8 x 403.3 x 611.6mm/ 10.62 x 15.88 x 24.08 inches

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

45.5 x 368.4 x 611.6mm/ 1.79 x 14.5 x 24.08 inches

Weight Packed 11.00kg/24.25lbs.

Weight Unpacked 6.95kg/15.32lbs.

Weight (Monitor Head Only)

5.0kg/11.02lbs.

SPECIAL FEATURES

Smart Power*

Yes

Anti-glare

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot +/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington™ Lock Slot Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/24.5mm

WHAT'S IN THE BOX

Monitor with stand 1 x Power Cable

1 x HDMI Cable

1 x USB Type-C[™] to Type-C[™] cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

EU RoHS

Yes

CCC Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

TCO

TCO 8.0/TCO Edge 2.0

ULE Gold













*The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device. 75W power delivery can be achieved when downstream USB ports are not connected and OSD brightness setting is <61.

Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen1; 10 Gbit/s for USB 3.2 Gen2 & 20 Gbit/s for USB 3.2.

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Lenovo ThinkVision X1

X1 Wide Flat Panel Monitor Name

Case color **Black**

Type-model 60E2GAR1US / 60E2GAT1US / 60E2GAT1EU

TFT-LCD, IPS (In-Plane Switching), White LED backlight 27" (684.7mm) diagonal 23.49" x 13.21" (596.7mm x 335.7mm) Panel

Viewable image size

Max view area (W x H)

3840x2160 Optimum resolution Max pixel rate 600MHz 16:9 Aspect ratio Pixel pitch (mm) 0.16 x 0.16mm Dot/Pixel per Inch 163 dpi

300 nits or cd/m2 (typical) Brightness

Contrast ratio 1300:1 (typical) Pixel response time 6ms

Color gamut 99%

Viewing angle at 10:1 CR 178° horizontal, 178° vertical Stand Tilt stand Sides: 0.088" (2.23mm) Bezel width 19.35" H x 24.19" W x 10.63" D; 491.4mm H x 614.5mm W x 270.0mm D Dimensions

(HxWxD, including stand)

Power supply 40 watts typical, 130 watts maximum (with USB),

<0.5 watts sleep/off; < 0.5 watts switch off

14.11 lb; 6.40kg (including stand) Weight

Limited warranty4 3 year Available date March 2016

VESA DDC2B/CI VESA-compliant² Power management ENERGY STAR® 7.0 **Ergonomics** ISO 9241-307 Emission standards FCC Class B

TCO Displays 7.0, RoHS, EPEAT™ Silver rating, Environmental

ULE Gold

Preset resolutions VGA: 640x350, 640x480, 720x400

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x720, 1280x768, 1280x800, 1360x768

WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050

Full HD: 1920x1080, 1920x1200

UHD: 3840x2160

Presets / user settings Standard presets: 20; user settings: 20

Viewing adjustments Tilt: 22° back, -5° forward;

None

Rotating screen

On screen display Control features On screen display with digital user controls (8 languages)

Direct access (touch buttons on front) for menu, mute, volume up/down, and brightness USB hub USB Hub: one USB 3.1 Type-C upstream port, four USB 3.0 Type-A downstream ports

Multimedia Integrated stereo speakers (3 watts x 2), bulit-in microphone

Camera Full HD camera with LED light Multiple input Support HDMI, DisplayPort

(1) HDMI (1.4), digital, **HDCP-compliant**(2) DisplayPort (1.2), digital, **HDCP-compliant**(1) detachable, HDMI at each end, digital, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter Monitor connectors Signal cables

Wall or desk mounting using the Extend Arm or third-party accessories meeting the VESA FPMPMI® (100mm mount) Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features Security

Ship group Monitor, detachable stand, Quick start and safety poster, 1.8 meter DisplayPort cable, 1.8 meter HDMI cable,

1.8 meter USB Type-C cable, 1.8 meter USB Type-C to Type-A cable, 1.8 meter black power cord,

mini DP to DP adapter, power adapter (135W)

Limited Warranty

See details at http://support.lenovo.com/en US/quides-and-manuals/de-

tail.page?DocID=UM008281

Accessories

Kensington MicroSaver Cable Lock 73P2582 Kensington Twin Head Cable Lock 45K1620 Lenovo Security Cable Lock 57Y4303

See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor with speaker

• Supports 3840x2160 resolution

Microsoft® Windows® 7 certified

• Microsoft Windows 10 certified

• 3watts x 2 stereo speakers

• 5-Ports USB hub, support USB Type-C

ThinkVision X1 Monitor

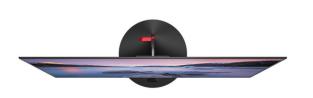






















ThinkVision X1 (2nd GEN) MONITOR

EXTREME STYLISH, EXTREME FOREFRONT.



THE MILESTONE OF X-SERIES, 27" FULL-SCREEN, 4K, THUNDERBOLT™ 3 MONITOR.

Pushing the limit of screen share ratio with innovative technology, the 27" Lenovo[™] ThinkVision® X1 (2nd GEN) display brings full-screen and ultra-slim appearance in elegant design. With 4K resolution and >99% sRGB color gamut, you will be assured of excellent watching experience and Thunderbolt[™] 3 interface will bring the best user experience. "Motor" camera is first used on monitor, which will move up and down automatically and with it you will own standard VoIP system.

WHY YOU SHOULD BUY THE LENOVO THINKVISION X1 (2nd GEN) MONITOR



Full-screen appearance

With world's slimmest (4.7 mm) 27" 4K TBT monitor you will experience full-screen 4-side Near-Edgeless display with the screen ratio of approximately 93%. The monitor also comes with a metal stand and a base.



Brilliant performance

The 4K UHD IPS screen displays 3840 x 2160 resolution at 60 Hz, 99% sRGB color gamut, 10-bit depth, with 1.07 billion color support assures you stunning visuals and superb color experience.



Convenient user experience

Total versatility with
Thunderbolt™ 3 interface
supporting 4K + USB 3.0 &
45W PD + motor-camera with
dual-array microphone. A Think
RedDot tracking button is
integrated in the back cover.

THE LENOVO THINKVISION X1 (2nd GEN) MONITOR IS BEST SUITED FOR



The Executives and CXO of company.



SOHO and Gold Collars with high income.



Trendsetters who pursue an extreme and forefront monitor.













ThinkVisinn X1 (2nd GEN) MONITOR



SPECIFICATIONS

DI:	SP	LA	Υ
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Panel Size 27' Panel Type IPS WI FD Backlight Resolution 3840 (H) x 2160 (V)

Aspect Ratio Anti-Glare Yes

596.7 (H) x 335.7 (V) Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) 350 cd/m² 178°/178° Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) 1000:1 Dynamic Contrast Ratio Pixel Pitch (W x H) (mm)

0.1554 x 0.1554

Dot/Pixel Per Inch (DP/PPI) 163 99% sRGB Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off) 4/6/14 ms (G-to-G)

POWER CONSUMPTION

65 W Maximum 135 W 0.5 W Sleep-Mode Switch Off-Mode 0.5 W **Power Supply** External

Power Voltage 100 VAC - 240 VAC Voltage Dynamic Frequency 50 Hz - 60 Hz

SIGNAL INPUT

Video Input Signals DisplayPort™ 1.2 + HDMI™ 2.0 + Thunderbolt™ 3 Video Cables Supplied HDMI™ + Thunderbolt™ 3

Video Cable Length

Yes (4 x USB 3.0) USB Hub

USB Cable Supplied N/A Audio-Jack

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/

Bandwidth

Default Color Temperature

Preset Modes **OSD Buttons**

OSD Languages

30 kHz - 136 kHz 30 Hz - 60 Hz 3840 x 2160

20 Gbps 6500K 24

1.2 / 0.05"

1.2 / 0.05"

18 m

2 Buttons + Tracking Point English, French, Italian, German, Spanish, Japanese, Chinese, Russian

ENVIRONMENTAL

Temperature 0°C - 45°C Operating -20°C - 60°C Non-Operating

Humidity

8% - 80% Operating Non-Operating 5% - 95%

Altitude

16 000 ft Operating Non-Operating 40,000 ft

Arsenic-Free Glass Yes

PVC-Free Yes (W/O cable)

Mercury-Free Yes PCC % of Plastic Resins 25%

DIMENSIONS (W x D x H)

Size Packed (mm)

718 x 140 x 470 28.27" x 5.51" x 18.5" (inches)

Size Unpacked with Stand (mm)

609.74 x 234.81 x 474.76 24" x 9.24" x 18.69" (inches)

Size Unpacked without Stand (Monitor Head Only)

609 74 x 32 7 x 351 71 (mm) 24" x 1.29" x 13.85" (inches)

Distance from Table to Panel Lowest Pixel at Bottom of Screen

134 / 5.276" (mm / inches)

Highest Pixel at Top of Screen (mm / inches) 450 / 17.717"

Stand Base Footprint Area

234.81 x 234.81 (mm) (inches) 9.24" x 9.24"

Weight

Starting at 18.45 lbs (8.37 kg) Packed Starting at 12.21 lbs (5.54 kg) Unpacked Monitor Head Only Starting at 9.46 lbs (4.29 kg)

MECHANICAL

Tilt Angle (Front / Back) -5° / 30° Swivel Angle (Left / Right) N/A N/A Lift (mm) N/A Pivot N/A VESA® Mount (mm) Kensington® Lock Slot Yes Cable Management Yes Bezel Color N/A Bezel Width 1.2 / 0.05"

Top (mm / inches) Bottom (mm / inches) Sides (mm / inches)

COMPLIANCE

EPEAT™ Silver **ENERGY STAR® Rating** 7.0 ULE Silver TCO® 70 Yes Windows Certification Windows 10 China Energy Label

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability ww





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Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit http://psref.lenovo.com/ for the latest version of Product Specifications Reference.

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