

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 547, August 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.

August 28, 2019 - Version 547

Additions in this update

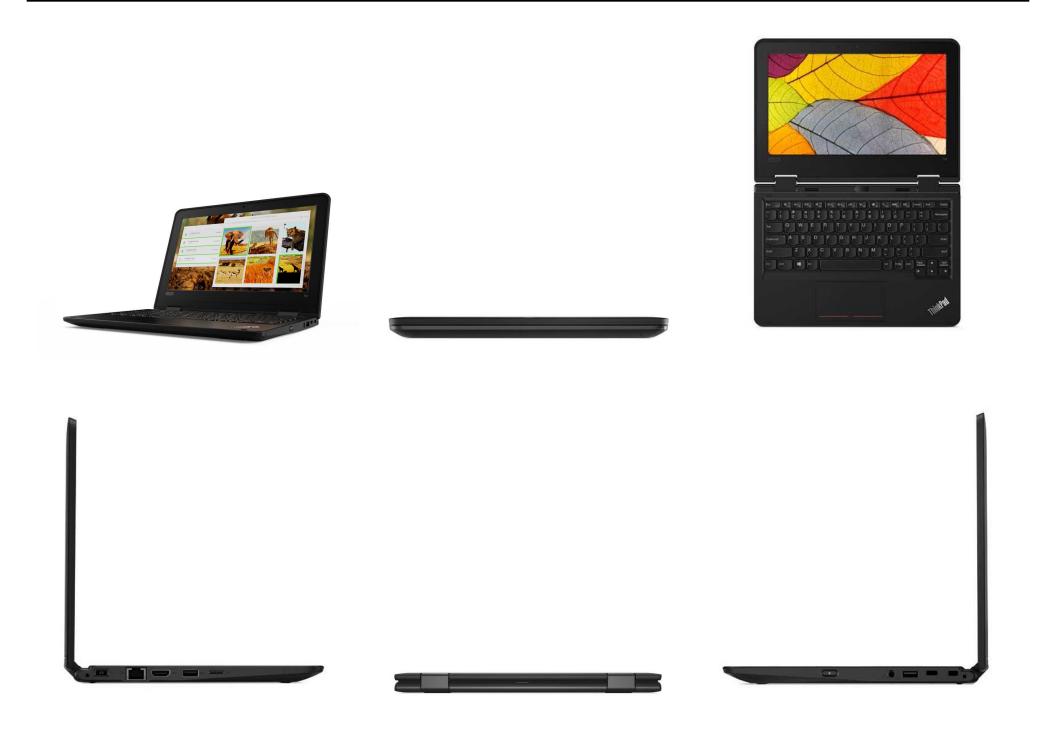
► New product(s)
ThinkPad P73 announced August 2019

► Others None

Withdrawals in this update

► Withdrawn product(s)

None



ThinkPad 11e (5th Gen) Platform Specifications

Processor		7th Generation Intel® Core™ m / i5 Processor, Intel Celeron® processor, ontel Pentium® Silver processor								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
	Processor Number	# of Cores	# of Threads		Burst Frequency		Memory Types	Proce Grap	hics	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 Graphic		Smart card reade Media reader	
	Celeron N4100		4	1.1 GHz	2.4 GHz	4MB	DDR4-2400	Intel I Graphic		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	DD114-2400	Intel I Graphic			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 ex	ternal o al inde	digital m penden	onitor via	HDMI or U	JSB Typ				Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec, stereo speakers, 2W x 2, Dolby® Audio™, mono digital microphone, combo audio/microphone jack
Chipset	Max resolut Intel SoC (S					e-C); 4	096x2160@30	Hz (HD	MI)	Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Memory	4GB or 8GE soldered to	3 / 1866	6MHz Lİ	PDDR3 or	2400MHz	DDR4	/			Security Security chip	Power-on password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
Display	Size Resolu		7.			Aspect Ratio	Contrast Ratio	Gamut	Viewing Angle	System Mgt Fingerprint reade NFC	None rNone
	11.6" HD (13			Anti-glare Anti-glare	250 nits 250 nits	16:9 16:9	400:1 or 500:1 800:1	45% 45%	90° 170°	Battery	Integrated Li-ion 42Wh battery
Multi-touch (opt)							re (HD IPS onl		170	Max battery life	MobileMark® 2014: 13.9 hr * Battery life varies significantly with settings, usage, & other factors
Storage	eMMC flash									AC adapter	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter
Optical	M.2 SSD / F None	PCIe N	VMe, P	Cle 3.0 x 2	2, 16Gb/s					Operating system (optional)	one of the following, configurable by model: • Windows® 10 Home 64
Ethernet	Realtek RTI	_81110	GUS Gig	gabit Netw	ork Conne	ction					Windows 10 Pro 64 Windows 10 Pro in C roads
WLAN + Bluetooth™	One of the for Intel Wirel	ess-AC	9260, \	Wi-Fi 2x2	802.11ac +	⊦ Blueto	ooth 5.0, M.2 c	ard			Windows 10 Pro in S mode No OS
	 Intel Wirel 	ess-AC	9560, \	Wi-Fi 2x2	802.11ac -	- Blueto	ooth 5.0, M.2 c	ard (US	only)	Limited warranty	One of the following, configurable by model: • 1-year depot repair service
WWAN	None	None									3-year/1-yr battery depot repair service
										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.



ThinkPad A275 Platform Specifications

Processor	AMD PRO A-Se	eries A	PUs							er Optional: Smart card reader			
	Processor	# of	_ # of	Base	Max Turbo	Cache	Memory	Processor	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.1 Gen 1 (USB 3.0, one Always On),			
	Number	Cores	Threads	Frequency	Frequency	0000	Types	Graphics AMD	I orts	USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	PRO A10-8730B			2.4 GHz	3.3 GHz			Radeon™		HDMI 1.4b, Ethernet (RJ-45) * Depending on many factors, actual data transfer speed may be lower than theoretical speed.			
		4	4			2MB	DDR4-1866	R5 Graphics	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
	PRO A12-8830B PRO A10-9700B	4	-	2.5 GHz 2.5 GHz	3.4 GHz 3.4 GHz	211110	DD114 1000	AMD Radeon	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter			
	PRO A10-9700B	4		2.5 GHz 2.7 GHz	3.4 GHz			R7 Graphics	Company (ambigues)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
	* Windows 7 is or		oorted by			D A12-8	830B	· · ·)HD720p resolution, fixed focus HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /			
Graphics	AMD Radeon F									dual array microphone, combo audio/microphone jack			
	supports extern supports three Max resolution:	indepe	endent di	splays;			160@30Hz	(HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Chipset	AMD SoC (Syster 16GB max / 186	tem or	n Chip) p	latform			100 @ 001 12	(FIDIVII)	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole dTPM 1.2: discrete TPM 1.2, TCG Certified			
Memory Display	Some: 12.5" (3						acklight		dTPM 2.0: discrete TPM 2.0, TCG Certified Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm re				
Display	220 nits	s, 16:9	aspect r	atio, 500:1	contrast ra	tio	•		NFČ '	None			
		s, 16:9	aspect r	àtio, 700:1	contrast ra	tio, 170	° viewing a		Internal battery External battery	Optional: Integrated Li-ion or Li-Polymer 3-cell (23Wh) Li-ion 3-cell (23Wh) or 6-cell (48Wh)			
Multi-touch (opt)	On-cell touch, s				•		ly)		Max battery life	Models			
Storage	System has one I Some: HDD / S						Oratastian C	voto m TM	(MobileMark® 2014)	Max battery life 5.05 fil 10.1 fil 15.6 fil			
	Some: SSD/S Some: M.2 SS	SATA 6	3.0Gb/s,	2.5" wide, 7	'mm high (e	e.g. xxx		ystem	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W slim tip AC adapter or 45W USB Type-C AC adapter			
Optical	None	<i>,</i> D / I C	JIC INVIVI	c, i Oic 0.0	X 2, 100b/	3			Operating system	One of the following, configurable by model:			
Ethernet	Realtek® RTL8	111EP	V Gigab	it Ethernet	connection					 Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 			
WLAN Bluetooth™	Realtek RTL882 Bluetooth 4.1 w									Windows 10 Home 64 Windows 10 Pro 64			
WWAN (optional)				by model:					Limited warranty	One of the following, configurable by model:			
	Wireless WANIntegrated Mo			1 1G ITE-A						 1-year depot repair service 3-year/1-yr battery depot repair service 			
	Qualcomm® S	Snapdr	agon™)	X7 LTE-A (S	Sierra Wirel	ess EN	17455)			3-year/1-yr battery limited onsite service			
SIM card (opt)	* For non-WWAN Micro-SIM card	<i>model,</i> slot, c	<i>it means</i> opt Verizo	the model is on LTE (US	<i>NOT WWAN</i> SIM card	l upgrad	able		Mil-Spec test	MIL-STD-810G military testing			
Dimensions	WxDxH: 12.03		<u> </u>	,		m x 20	.3mm		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Weight	Models		3-cell	_	+ 3-cell		3 + 6-cell						
0		2.79 lb /	1.27 kg	2.98 lb	/ 1.36 kg	3.33	lb / 1.52 kg						
Case color Case material	Black Glass-Fiber Re	inforce	ed Plastic	:									
Note: The enecific:	ationa about mou	not ho	ملط ملئ ميره	in all region						Lenovo			

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









ThinkPad A285 Platform Specifications

Processor	AMD Ryzer	า™ PRC) Mobile	Processors	s with Rade	eon™ Vega	Graphics			er Optional: Smart card reader		
	Processor Number	# of	# of		Max Turbo	Cache	Memory	Processor Graphics	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,		
	Ryzen 3 PRO 2300U	Cores	4	2.0 GHz	Frequency 3.4 GHz		Types	Radeon Vega 6 Graphics		two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector,		
	Ryzen 5 PRO 2500U	4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	DDR4-2400	Dodoon Voca		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		
	Ryzen 7 PRO 2700U		8	2.2 GHz	3.8 GHz			Radeon Vega 10 Graphics	Monitor cable	* Depending on many factors, actuál dafa transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter		
Graphics	AMD Rades supports ex supports fo	cternal ur inde	digital me	onitor via F displavs;	HDMI or ÚS	B Type-C	;		(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		
	Max resolut			,		C); 4096x	2160@60H	z (HDMI)	Camera (optional)) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus		
Chipset Memory	AMD SoC (8GB or 160					stemboard	. no sockets	s	IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec /			
Display	Some: 12.	5" (317	7.5mm) H	D (1366x7		are, LED			Audio support	atomotion Healter ALC3267 codec7 stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack		
Multi touch (ont)	Some: 12.9 300 On-cell touc) nits, 1	16:9 aśpe	ct ràtio, 80	0:1 contras	st ratio, 17	D backlight 0° viewing		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) Storage	One of the fo		•			orily)			Security Power-on password, hard disk password, supervisor password, security			
Storage	 M.2 SSD 	/ SATA	6.0Gb/s	-					Security chip Discrete TPM 2.0, TCG Certified System Mgt DASH Management			
Optical	• M.2 SSD None	/ PCle	NVMe, F	PCle 3.0 x	4, 32Gb/s					er Optional: Touch style match on chip fingerprint reader on the palm rest None		
Ethernet	Gigabit Eth				ernet Exter	sion Adap	oter Gen 2		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter		
WLAN Bluetooth™	Realtek® R ⁻ Bluetooth 4								Max battery life	MobileMark® 2014: 10.55 hr * Battery life varies significantly with settings, usage, & other factors		
WWAN (optional)									AC adapter	45W or 65W USB Type-C AC adapter		
	Intel XMM™ * For non-WI	^ 7360 NAN m	(Fibocon	n L850-GL)), M.2 card	WAN upara	dahle		Limited warranty	n Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:		
SIM card (opt)	Nano-SIM o	card sl	ot, in the	combo slo					Limited warranty	1-year depot repair service		
Dimensions	optional Ve								-	3-year/1-yr battery depot repair service 3-year/1 yr bettery limited engite consider		
Dimensions	WxDxH (HI 12.				mm x 209.8	3mm x 17.	4mm		Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing		
	WxDxH (FF			70": 207 7:	mm x 209.8	2mm v 17	9mm		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		
Weight	FHD non-tou	ouch m ich mo	odel: 2. del: 2.	49 lb / 1.13 78 lb / 1.26	3 kg; 3 kg;	אווווו א 17.	OHIII			2. 2.1. God (Go only), Enterior Other Got, North Compilant		
Case color	FHD multi-t Black	touch r	nodel: 2.	79 lb / 1.27	′ kg							
Case material	Display cov				on-touch m							
	Bottom:	M	lagnesiur	n/Aluminur	n							
Note: The specific	ations above i	may no	t be availa	able in all re	egions.					Lenovo		



ThinkPad A475 Platform Specifications

Processor	AMD PRO A-Se	eries A	PUs						Dimensions	<i>WxDxH:</i> 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 3-cell or 3 + 3-cell 6-cell or 3 + 6-cell				
	Number	Cores	Threads	Frequency	Frequency	Oddile	Types	Graphics		Magnesium 3.49 lb / 1.58 kg 3.92 lb / 1.78 kg				
	PRO A10-8730B			2.4 GHz	3.3 GHz			AMD Radeon™	0	PPS 3.63 lb / 1.65 kg 4.35 lb / 1.85 kg				
	1 110 A10-0730D			2.4 0112	3.5 GHZ			R5 Graphics	Case color Case material	Black Display cover: Magnesium Hybrid or PPS (Magnesium Hybrid for US only);				
	PRO A12-8830B	4	4	2.5 GHz	3.4 GHz	2MB	2MB DDR4-1866 AMD		Case material	Bottom: Glass-Fiber Reinforced Plastic				
	PRO A10-9700B]		2.5 GHz	3.4 GHz			Radeon	Smart card reade	r Optional: Smart card reader				
	PRO A12-9800B			2.7 GHz	3.6 GHz			R7 Graphics	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I				
	* Windows 7 is on	nly supp	orted by	PRO A10-87	30B and PRO	O A12-8	830B		Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On), USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),				
Graphics	AMD Radeon R					_			HDMI 1.4b, Ethernet (RJ-45), Dock connector					
	supports extern supports three i				I or USB IS	/pe-C;				* Depending on many factors, actual data transfer speed may be lower than theoretic				
	Max resolution:				Type-C); 4	096x2	160@30Hz	(HDMI)	Monitor cable	Optional: Lenovo USB-C to VGA Adapter				
Chipset	AMD SoC (Syst	tem or	n Chip) p	latform	,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,			,	Camera (optional) HD720p resolution, fixed focus Audio support HD Audio, Realtek ALC3268 codec / stereo speakers, 2W x 2 /					
Memory	32GB max / 186	66MHz	DDR4,	dual-chann	el capable,	two DI	DR4 SO-DI	MM sockets	Audio Support	dual array microphone, combo audio/microphone jack				
Display	Some: 14.0" (3	355mm	n) HD (13	366x768), a	nti-glare, Ll	ED bac	klight,		Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				
	220 nits Some: 14.0" (3			atio, 350:1			ooklight ID	ie.	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
				atio, 700:1					Security	Power-on password, hard disk password, supervisor password, security keyhole				
Multi-touch (opt)	On-cell touch, s								Security chip dTPM 1.2: discrete TPM 1.2, TCG Certified dTPM 2.0: discrete TPM 2.0, TCG Certified Fingerprint reader Optional: Touch style match on chip fingerprint reader on the keyboard be:					
Storage	System has one h													
_	Some: HDD / S							ystem™	NFC	None				
	Some: SSD / S Some: M.2 SS						GB 55D)		Internal battery	Optional: Integrated Li-Polymer 3-cell (24Wh)				
	* Installed M.2 SS	SD is P	Cle 3.0 x 4	4 but run at P	Cle 3.0 x 2 d	due to M	.2 SSD adap	ter limitation	External battery Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh)					
Optical	None								Max battery life (MobileMark® 2014)	Models 3-cell 3 + 3-cell 6-cell 48Wh 3 + 6-cell 48Wh				
Ethernet	Realtek® RTL81	111EP	V Gigabi	it Ethernet o	connection				(WobileWark* 2014)	Max ballery life 5.13 III 10.26 III 15.4 III				
WLAN Bluetooth™	Realtek RTL882 Bluetooth 4.1 w								AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter				
WWAN (optional)			<u>, </u>						Operating system	One of the following, configurable by model:				
WWW. Copularian	 Wireless WAN 	l upgra	adable	•						Windows® 7 Professional 64 preinstalled				
	 Integrated Mo 						\			through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64				
	Qualcomm® S * For non-WWAN									Windows 10 Pro 64				
SIM card (opt)	Micro-SIM card					иругии	шыс		Limited warranty	One of the following, configurable by model:				
									1	1-year depot repair service				
										3-year/1-yr battery depot repair service 3-year/1 yr battery limited engits convice				
									Mil Coop toot	3-year/1-yr battery limited onsite service MIL-STD-810G military testing				
									Mil-Spec test	,				
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				









ThinkPad A485 Platform Specifications

Processor	AMD Ryzer	າ™ PR0) Mobile	Processors	s with Rade	eon™ Vega	Graphics		Smart card reade	r Optional: Smart card reader			
	Processor	# of	_ # of		Max Turbo	Cache	Memory	Processor	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2,			
	Number	Cores	Threads	Frequency	Frequency	Odono	Types	Graphics	1 0113	two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),			
	Ryzen 3 PRO 2300U		4	2.0 GHz	3.4 GHz			Radeon Vega 6 Graphics		HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,			
	Ryzen 5 PRO 2500U	4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics		4-in-1 media reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole			
	Ryzen 7 PRO 2700U		8	2.2 GHz	3.8 GHz			Radeon Vega 10 Graphics	Monitor cable(opt	* Depending on many factors, actual data transfer speed may be lower than theoretical speed) HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Graphics	AMD Rader supports ex supports fo	ternaľ	digital m	onitor via F					Bundled Accy Camera (optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None al) One of the following, configurable by model:			
	Max resolut				JSB Type-0	C); 4096x2	2160@60H	z (HDMI)	HD720p camera with ThinkShutter camera privacy, fixed focus				
Chipset Memory	AMD SoC (32GB max * Installed DI	/ 2400	MHz DDİ	Ŕ4, dual-ch	nannel capa			OIMM sockets	Audio support	 IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack 			
Display) nits, ⁻	6:9 aspe	ct ratio, 40	0:1 contras	st ratio	0 ,	D.C.	 Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	Some: 14.0	บ" (355) nits. 1	mm) FHI 16:9 aspe	D (1920X10 ect ratio, 70	080), anti-g 0:1 contras	lare, LED st ratio, 17	bаскііgnt, і 0° viewing а	PS, angle	Security	Power-on password, hard disk password, supervisor password, security keyhole			
Multi-touch (opt)	On-cell touc	ch, sup	ports 10	-finger ges	ture (FHD	only)		ag.o	Security chip	Discrete TPM 2.0, TCG Certified			
Storage	System has a Some: HD Some: SS	D/SA	TA 6.0Gb	/s, 2.5" wid	de, 7mm hi	gh, Active		System™	System Mgt Fingerprint reade NFC	DASH Management r Optional: Touch style match on chip fingerprint reader on the keyboard bezel None			
	Some: M.2 Some: 128	SSD SGB M	/ PCIe N' .2 SSD /	VMe, PCIe PCIe NVM	3.0 x 4 le, PCle 3.0) x 2,			Battery	Integrated Li-ion 24Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery			
	IN V * Installed M.	VWAN <i>2 SSD</i>	slot as 2 is PCle 3.0	nd Storage 0 x 4 but run	e, mutually 1 <i>at PCle 3.0</i>	exclusive v	with WWAN M.2 SSD ada	l apter limitation	Max battery life (MobileMark® 2014)	Models 24Wh 48Wh 72Wh 24Wh 24Wh 24Wh 48Wh 24Wh + 72Wh			
Optical	None									Max battery life 5.37 hr 10.76 hr 16.4 hr 10.76 hr 16.4 hr 22.15 hr * Battery life varies significantly with settings, usage, & other factors			
Ethernet	Realtek® R			•					AC adapter	45W or 65W USB Type-C AC adapter			
WLAN Bluetooth™	Realtek RT								Operating system	Windows® 10 Home 64 or Windows 10 Pro 64			
	Bluetooth 4 Integrated					elooth con	ibo adapter		Limited warranty	One of the following, configurable by model:			
WWAN (optional)	Intel XMM™ * For non-WI	7360 NAN m	(Fibocom	n L850-GL) ans the mod), M.2 card lel is NOT W		dable			 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
SIM card (opt) Dimensions	Nano-SIM o				• •		10 05		Mil-Spec test	MIL-STD-810G military testing			
Weight	Models						x 19.95mm Vh + 48Wh /		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
3 1	Magnesium			/ 1.58 kg	1 400011, 72	3.92 lb /		724411					
	PPS			/ 1.65 kg		4.08 lb /							
Case color Case material	Black Display cov	or: M	nanosium	Lybrid or	DDC:								
Case material	Bottom:	Gl	agnesium ass-Fibe	r Reinforce	ed Plastic								
Note: The specifica	ations ahove	may no	t he avail	ahla in all re	agione					Lenovo			











ThinkPad E480 Platform Specifications

Processor	7th Genera (i3-7130U			e™ i3 / i5 P <i>le in US an</i>		r			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	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 3.87 lb / 1.75kg Black or silver Display cover: Aluminum or PC/ABS plastic:		
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	Case material	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),		
		# 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	<u>2</u> 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 s		
Graphics	i7-8550U			1.8 GHz	4.0 GHz Graphics 6	8MB	rocessor or		Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /		
Grapines	Intel HD G	raphic	s 620 or	Intel UHD	Graphics 6	20 in p	rocessor ar			dual array microphone, headphone / microphone combo jack		
	AMD Rade supports e supports d	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		
	Max resolu	ition:	1920x10	80 (HDMI)	@60Hz				Security Power-on password, hard disk password, supervisor password, security chip (opt)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Cer			
Chipset Memory	32GB max	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM soc * System clocks down for processors with lower memory controller								None r Optional: Touch style fingerprint reader on the palm rest None		
Display				D (1366x76 bect ratio, 4			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 ⁻ bect ratio, 4	1080), anti-	glare, I	_ED backlig	ght, IPS,	Max battery life	with 65W USB Type-C 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	Up to 2 drive Some: HD					able ur	ogradable			Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
	Some: M.:	tive Pr 2 SSD	otection : O / PCIe N	System™ √VMe					Limited warranty	One of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service		
Optane™ memory Optical	y <i>Optional:</i> I None	intel O	ptane m	emory, PCI	e NVMe, P	Cle 3.0) x 2		Mil-Spec test	MIL-STD-810G military testing		
Ethernet	Gigabit Eth	nernet	Connect	ion, Realte	k R8111G	JS			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		
WLAN + Bluetooth™		RTL88 RTL88 Il Band	821CE, V 22BE, W d Wireles	Wi-Fi 1x1 8 'i-Fi 2x2 80 s-AC 3165	02.11ac + l 2.11ac + B , 1x1, Wi-F	luetootl i + Blue	h 4.1, M.2 c	card M.2 Card				
WWAN SIM card	None None											
Note: The specifica		may n	ot be ava	ilable in all	regions.							



(intel)





















ThinkPad E490 Platform Specifications

Processor	8th Generation Intel®	Core™ i3 / i5 /	7 Processor					Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm
		eads Frequency	Frequency	Cache	Memory Types		ocessor raphics	Weight Case color	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 or silver
	i5-8265U	4 2.1 GHz 1.6 GHz 1.8 GHz	3.9 GHz	4MB 6MB 8MB	DDR4-240)()	HD Graphics 620	1	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
Graphics	Intel UHD Graphics 6 Intel UHD Graphics 6 AMD Radeon RX 55C supports external digi supports dual independax resolution: 4096	520 in processo 520 in processo DX Graphics, 20 ital monitor via indent display; 5x2304@60Hz (r only or r and BB DDR5 me HDMI or US USB Type-C	emory; B Type	e-C;	□ 24Hz (H	HDMI)	Smart card reader Media reader Ports Monitor cable	brNone MicroSD card reader 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
Chipset Memory	Intel SoC (System on 32GB max / 2400MH: * Installed memory is ac	lz DDŔ4, dual-c	hannel capa	ble, tw	vo DDR4 :	SO-DIMN	M sockets	Bundled Accy Camera	None HD720p camera, fixed focus
Display	Size / Resolution	Surface Type	Brightness A	Aspect Ratio	Contrast V	/iewing Angle	Multi-touch	Audio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	14.0" HD (1366x768) 14.0" FHD (1920x1080)	Anti-glare TN Anti-glare IPS		16:9 16:9	400:1 600:1		Non-touch 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 Storage	None Up to two drives (one M. HDD / SATA 6.0Gb/ M.2 2280 SSD / SA M.2 2280 SSD / PO M.2 2242 SSD / PO	/s, 2.5" wide, 7r ATA 6.0Gb/s Die NVMe, PCle	nm high, Act 3.0 x 2	ive Pro	otection S	system™		Security Security chip System Mgt Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset None r Optional: Touch style fingerprint reader on the palm rest None
Optane™ memory Optical	y <i>Optional:</i> Intel Optan None			le 3.0	x 2			Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Ethernet	Gigabit Ethernet Con	nection, Realte	k R8111GU	S				Max battery life	<i>MobileMark</i> ® <i>2014:</i> 13 hr
WLAN + Bluetooth™	One of the following, • Realtek® RTL8822B • Intel Wireless-AC 92	3E, Wi-Fi 2x2 80	2.11ac + Bl					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 SIM card	None None	200, VVI-FI ZXZ (002.11aC + E	nueloc	лит Э.U, IVI.	Caru		Limited warranty Mil-Spec test	One of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service 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.

















ThinkPad E490s Platform Specifications

Processor	8th Generation I	ntel® Cor	e™ i5 / i7 P	rocessor					Dimensions	WxDxH: 12.96" x 9.13" x 0.70"; 329mm x 232mm x 17.9mm		
	Processor # of Number Cores	# of Threads		Max Turbo Frequency	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	3.9 GHz 4.5 GHz	6MB 8MB	DDR4-240	00 Intel	UHD Graphics 620	Smart card reade Media reader			
Graphics	Intel UHD Graph Intel UHD Graph AMD Radeon R supports externa supports three in Max resolution:	nics 620 i X 540X G al digital i ndepende 4096x23	n processor Graphics, 20 monitor via l ent display; 04@60Hz (r and 3B DDR5 m HDMI or US USB Type-	SB Typ	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 (Syste 32GB max / 240 * Installed memory	OMHz DI	DR4, dual-c	hannel cap					Bundled Accy Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /		
Display	Size / Resolution	Sı	urface Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Multi-touch]	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack		
	14.0" FHD (1920x 14.0" FHD (1920x			220 nits 250 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	1000) Alli	ii-giare ii o	250 1113	10.3	000.1	170	1 NOTI-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 followin • M.2 2280 SSD • M.2 2242 SSD	/ SATA 6	6.0Gb/s						System Mgt Fingerprint reade	Discrete model: firmware TPM 2.0 integrated in chipset None rTouch style fingerprint reader on the palm rest		
Optical	None								NFČ	None		
Ethernet	Gigabit Ethernet				JS				Battery	Integrated Li-ion 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 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								Max battery life AC adapter	MobileMark® 2014: 11.5 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
WWAN	None									Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
SIM card	None								· · · · · · · · · · · · · · · · · · ·	1-year depot repair 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.













ThinkPad E495 Platform Specifications

Processor	AMD Ryze	en™ Mo	obile Pro	ocessors wi	th Radeon	[™] Vega G	raphics			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 Controller		rocessor 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
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3	, ,	Rade	eon Vega 3 Graphics	Case color Case material	Black Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
	Ryzen 5 3500U			2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400		eon Vega 8 Graphics	Smart card reade	erNone
	Ryzen 7 3700U	4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeo	on RX Vega 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	supports of supports of Max resolu	externa dual in ution:	aľ digital depend 3840x2	ega 8, or Ri monitor via ent display; 160@60Hz Chip) platfor	HDMI or USB Type	JSB Type	e-C;		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
Memory	32GB max	κ ່/ Ź40	OMHz [DR4, dual- lly 2666MHz	channel ca					Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /
Display	Size / Reso	olution	8	Surface Typ	e Brightnes	s Aspect Ratio	Contrast Vie	ewing ingle	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
Multi-touch	None	(1920x	1080) Ai	nti-glare IPS	250 nits	16:9	600:1 1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	 HDD / S. 	ATA 6.	.0Gb/s,	SSD and one 2.5" wide, 7	mm high, a			stem™		Fingerprint reade NFC	r None None
Optical	• M.2 2242 None	2 550) / PCIe	NVMe, PCI	e 3.0 x 2 o	r PCIe 3.	.0 X 4			Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Ethernet	Gigabit Et	hernet	t Conne	ction, Realt	ek R81110	SUS				Max battery life	MobileMark® 2014: 11 hr
WLAN + Bluetooth™	One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card									AC adapter	* 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
1404/441	 Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card None 									Operating system Limited warranty	
WWAN SIM card	None									Mil-Spec test	None
<u> </u>										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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









ThinkPad E580 Platform Specifications

Processor	7th Genera	ation In	itel® Core	e™ i3 / i5 P	rocessor o	r			WLAN +	One of the following, configurable by model:		
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	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 		
	i3-7020U		4	2.3 GHz	-	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	HZ - 3MB DDR4-2133 620		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		
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Starting at 4.7 lb / 2.1kg Case color Black or silver Case material Display cover: Aluminum; Bottom: PC/ABS plastic	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		Bottom: PC/ABS plastic		
	i7-8550U * i3-7130U is	s NOT a	available ii	1.8 GHz	4.0 GHz 1FA	8MB			Smart card readerNone Media reader MicroSD card reader			
·	Intel HD G	raphics raphics on RX xternal	s 620 or s 620 or 550 Gra I digital n	Intel UHD (Intel UHD (aphics, 2GE nonitor via	Graphics 62 Graphics 62 B DDR5 me	20 in p emory;	rocessor on rocessor an e-C;		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 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		
	Max resolu Intel SoC (ıtion: 1	1920x108	30 (HDMÍ) €	260Hz				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 ()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		
	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 USB Type-C 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	IC			AC adapter	45W or 65W USB Type-C AC adapter		
Etnernet	Gigabit Etr	iernet	Connect	ion, Realte	KHBIIIGU	JS			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.

























ThinkPad E590 Platform Specifications

Processor	8th Generation Intel® C	Core™ i3 / i5 / i7 Processor			Dimensions	<i>WxDxH:</i> 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm
		Base Max Turbo Cache ds Frequency Frequency 2.1 GHz 3.9 GHz 4MB	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;
	i3-8145U 2 4 i5-8265U 4 8		DDR4-2400	Intel UHD Graphics 620	Smart card reade Media reader	Bottom: PC/ABS plastic None MicroSD card reader 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
Graphics	supports external digita supports dual independ Max resolution: 4096x2	0 in processor and (Graphics, 2GB DDR5 memory al monitor via HDMI or USB Typ dent display; 2304@60Hz (USB Type-C); 40	e-C;	24Hz (HDMI)	Ports Monitor cable Bundled Accy	
Chipset Memory		DDA', dual-channel capable, t ally 2666MHz but run at 2400MHz	due to Intel li	mitation	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Display	Size / Resolution	Surface Type Brightness Aspect Ratio	Contrast V Ratio	iewing Angle Multi-touch		dual array microphone, headphone / microphone combo jack
		Anti-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) A None	Anti-glare IPS 250 nits 16:9	600:1	170° Non-touch	Security Security chip	Security chip Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset System Mgt None Fingerprint reader Optional: Touch style fingerprint reader on the palm rest
Storage	 M.2 2280 SSD / SATA M.2 2280 SSD / PCIe 	2.5" wide, 7mm high, Active Pr A 6.0Gb/s e NVMe, PCIe 3.0 x 2	rotection Sy	∕stem™	System Mgt Fingerprint reade NFC	
Optane™ memo Optical	 M.2 2242 SSD / PCIe ry Optional: Intel Optane None 	e NVMe, PCIe 3.0 x 2 memory, PCIe NVMe, PCIe 3.0) x 2		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Ethernet		ection, Realtek R8111GUS			Max battery life	MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors
WLAN +	One of the following, config	gurable by model:			AC adapter	45W or 65W USB Type-C AC adapter
Bluetooth™	 Realtek® RTL8822BE Intel Wireless-AC 926 	, Wi-Fi 2x2 802.11ac + Bluetoo 0, Wi-Fi 2x2 802.11ac + Blueto	th 4.2, M.2 oth 5.0. M.	card 2 card	Operating system Limited warranty	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WWAN SIM card	None None				_ Limited warranty	1-year mail-in repair service 1-year depot repair 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.













ThinkPad E595 Platform Specifications

Processor	AMD Ryz	en™ Mo	bile Pro	cessors wi	th Radeon	[™] Vega G	raphics		Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.9mm			
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Controller	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1 kg Black Display cover: Aluminum; Bottom: PC/ABS plastic			
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3		Radeon Vega 3 Graphics	Smart card reade				
	Ryzen 5 3500U	4		2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics		MicroSD card reader			
	Ryzen 7 3700U	4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeon RX Vega 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	supports of supports of Max resol	externa dual in ution:	al digital depende 3840x2		t HDMI or I (USB Type	JSB Type	e-C;	or; s0Hz (HDMI)	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than thee Bundled Accy Mone				
Chipset Memory	AMD 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 AMD limitation								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			
Display	Size / Reso				e Brightnes	S Ratio		ngle Wulti-touch	 Keyboard UltraNav™	G-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	15.6" HD (15.6" FHD			nti-glare TN nti-glare IPS				70° Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole			
Multi-touch	None								Security chip Discrete TPM 2.0, TCG Certified Fingerprint reader None				
Storage	• HDD / S	ATA 6.	0Gb/s, 2	SSD and one 2.5" wide, 7	mm high, A	Active Pro	otection Sys	tem™	NFČ Battery	None Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)			
Optical	None None	2 550	7 PCIE	NVMe, PCI	e 3.0 x 2 o	r PCIe 3.	U X 4		with 65W USB Type-C AC adapter Max battery life MobileMark® 2014: 10.3 hr	MobileMark® 2014: 10.3 hr			
Ethernet				ction, Realt		SUS			AC adapter	* Battery life varies significantly with settings, usage, & other factors 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								l	a Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:			
WWAN SIM card	None None							ourd	Limited warranty	 1-year mail-in repair service 1-year depot repair service 			
									Mil-Spec test	None			
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			

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













ThinkPad L380 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions	<i>WxDxH</i> : 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 3.22 lb / 1.46 kg Black or Silver
	Cel 3965U	00100	2	2.2 GHz	-	2MB	Туроо	Intel HD Graphics 610		Display cover: Aluminum Bottom: GFRP
	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	Smart card reade Media reader Ports	erNone 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),
		ation Ir	ntel Core	i5 / i7 Prod	essor					HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack,
	Processor Number i3-8130U	# of Cores			Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Monitor cable	microSD card reader, 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
	i5-8250U i5-8350U	4	8	2.2 GHz 1.6 GHz 1.7 GHz	3.4 GHz 3.4 GHz 3.6 GHz	4MB 6MB 6MB	DDR4-2400	Intel UHD Graphics 620	(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 Cable
Graphics	Intel HD Graphics 610, 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)						in process e-C;	or;	Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby [®] Audio [™] / dual array microphone, headphone / microphone combo jack
							96x2160@3	BOHz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
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							O-DIMM sockets	Security Security chip	Power-on password, hard disk password, supervisor password, security keyholo
Display	Some: 13.3" (338mm) HD (1366x768), anti-glare, LED backlight, 250 nits, 16:9 aspect ratio, 500:1 contrast ratio Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle							ıht, IPS,	vPro (optional)	Intel vPro Technology r Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology Near Field Communication
Multi-touch (opt)	on-cell tou					201 1411	0, 170 11011	g a.i.g.o	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Storage	One of the following, configurable by model: • M.2 SSD / SATA 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)							M.2 PCle NVMe)	with 65W USB Type-C AC adapter Max battery life	MobileMark® 2014: 16.1 hr *Battery life varies significantly with settings, usage, & other factors
Optical	None		,		.,	(9		,	AC adapter	45W or 65W USB Type-C AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) via optional ThinkPad Ethernet Extension Cable								Operating system Limited warranty	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
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							h 4.1, M.2 card		 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WWAN SIM card	None								Mil-Spec test	MIL-STD-810G military testing
Silvi Calu	SIM card None								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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





















ThinkPad L390 Platform Specifications

Processor	8th Generation Intel® C	Core™ i3 /	i5 / i7 Proces	sor				Smart card reade		
	Processor # of # of Number Cores Threa						essor phics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),	
	i3-8145U 2 4 i5-8265U i5-8365U 4 8 i7-8565U		Hz 3.9 GHz Hz 3.9 GHz Hz 4.1 GHz	4MB 6MB 6MB	DDR4-2400	Intel UHD	O Graphics 20	Monitor cable	(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 USB-C to HDMI (plus Power) Adapter: Lenovo USB-C to HDMI plus Power Adapter USB-C to DisplayPort Adapter: Lenovo USB-C to DisplayPort Adapter	
Graphics	Intel UHD Graphics 62 supports external digit supports three indeper Max resolution: 4096x	al monitor ndent disp	via HDMI or olays;	• • •		30Hz (HE	OMI)	Bundled		
Chipset Memory	Intel SoC (System on 0 32GB max / 2400MHz * Installed memory is actu	: DDŔ4, di	ual-channel c				sockets	Accessories (optional) Camera	USB-C to USB-A Adapter: USB-C to USB-C Cable 2m: HD720p camera, fixed focus	
Display	Size Resolution Surface Time Brightness Aspect Contrast Ratio Viewing						Viewing Angle	Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack	
	13.3" HD (1366x768) 13.3" FHD (1920x1080)	Anti-glare Anti-glare			700:1 (no	500:1 90° 700:1 (non-touch) 800:1 (multi-touch)		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
Multi-touch (opt)	On-cell touch, support	s 10-finge	r gesture (FH	D only)	1 000 (1000		Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified	
Storage	One of the following, conf • M.2 2280 SSD / SAT • M.2 2242 SSD / PCI	Ā 6.0Gb/s e NVMe,	S PCle 3.0 x 2					System Mgt (opt) Fingerprint reade	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication	
Optical	 M.2 2280 SSD / PCI Intel Optane[™] Memor M.2 2280, PCIe NVN None 	ory H10 w	ith Solid State	Storage	9,			Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 14.61 hr * Battery life varies significantly with settings, usage, & other factors	
Ethernet	Native Intel Ethernet C	Connection	1 I219-V (<i>Non</i>	-vPro) or	1219-LM (ı	vPro)		AC adapter	45W or 65W USB Type-C AC adapter	
	Lenovo USB-C to Ethe	ernet Adap	oter	ole Ol				<u> </u>	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:	
WLAN Bluetooth™	Intel Wireless-AC 9560 Bluetooth 5.0 wireless							Limited warranty	1-year depot repair service 1-year depot with 2-year planar repair service	
WWAN SIM card	None None								3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service	
Dimensions			"; 321.8mm x	224.2mi	m x 18.8mn	n		Mil-Spec test	MIL-STD-810G military testing	
Weight Case color Case material	Starting at 3.22 lb / 1.4 Black or Silver Display cover: Alumin Bottom: GFRP	J						Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant	

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



ThinkPad L470 Platform Specifications

Processor	6th Generation	n Intel® C	ore™ i3 / i5 /	i7 Process	or or			WWAN (optional)	One of the following, configurable by model:			
	Processor # o	of # of	Base	Max Turbo	Cache	Memory	Processor	(0,7)	Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A.			
	Number Cor	es Thread		Frequency		Types	Graphics		Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card			
	i3-6006U i3-6100U		2.0 GHz 2.3 GHz	-	3MB	3MB			Integrated Mobile Broadband 4G LTE.			
	i5-6200U 2	4	2.3 GHz	2.8 GHz	3MB	DDR4-2133	Intel HD Graphics 520	SIM card (opt)	Intel XMM™ 7160 (Fibocom L831-EAÚ), M.2 card (EMEA only)			
	i5-6300U		2.4 GHz	3.0 GHz	3MB	-	320		Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card			
				Dimensions Weight	WxDxH: 13.35" x 9.25" x 0.94"; 339mm x 235mm x 23.9mm Models 3-cell 6-cell							
	Processor # o		Base	Max Turbo		Memory	Processor	VVoigin	Integrated model 4.13 lb / 1.87 kg 4.45 lb / 2.02 kg			
		es Thread		Frequency	Cache	Types	Graphics		Discrete model 4.16 lb / 1.89 kg 4.48 lb / 2.03 kg			
	Cel 3965U	2	2.2 GHz	-	2MB		Intel HD Graphics 610	Case color Case material	Black PC/ABS plastic			
	i3-7100U		2.4 GHz	-	3MB			I	rOptional: Smart card reader			
	i5-7200U 2		2.5 GHz	3.1 GHz		DDR4-2133	Intel HD Graphics	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)			
	i5-7300U	4	2.6 GHz	3.5 GHz	3MB		620	Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On), VGA, Mini DisplayPort,			
	i7-7500U i7-7600U		2.7 GHz 2.8 GHz	3.5 GHz 3.9 GHz	4MB 4MB	-			Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	* i7 processor is	NOT avail		3.9 GHZ	4IVID			Camera (optional)HD720p resolution, fixed focus			
Graphics	Intel HD Grapl			ooccor only	or			Audio support	HD Audio, Realtek ALC3268 codec / stereo speakers, 1W x 2 /			
Graphics	Intel HD Grap	hics 620 i	n ozo in pro n processor	and AMD F	, oi Radeon	™ R5 M430	, 2GB memory;		dual array microphone, combo audio/microphone jack			
	supports exter	rnal analo	g monitor vi	a VGA and	digital r	monitor via	Mini DisplayPort;	Keyboard	6-row, spill-resistant, multimedia Fn keys			
	supports three	indepen	dent display: 160@60⊔z	S; (DB via mE	D cable	a): 1020v12	200@60Hz (VGA)	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Chipset				`	71 Cabit	e), 1320X12	.00@00112 (VGA)	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified			
Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets						O-DIMM sockets	vPro (optional)	Pro (optional) Intel vPro Technology			
	* System clocks	* System clocks down for processors with lower memory controller						Fingerprint reader	r Optional: Swipe style fingerprint reader on the keyboard bezel			
Display	Some: 14.0"	(355mm)	HD (1366x7	68), anti-gla	are, LEI	D backlight,		NFČ '	None			
	220 ni Some: 14.0		spect ratio, 5				ht IDC	Battery Max battery life ¹⁰ (<i>MobileMark</i> ® 2014)	Li-ion 3-cell (24Wh) or 6-cell (48Wh or 72Wh)			
			spect ratio, 7						Models 3-cell 6-cell 48Wh 6-cell 72Wh			
Multi-touch	None	,	-p			,,	g ag.o	,	Integrated model 7.24 hr			
Storage	System has one	HDD slot	or one M.2 22	80 slot exclus	sively for	r storage		* Battery life varies significantly with settings, usage, & other factors				
	Some: HDD /)Gb/s, 2.5" v n System™	vide, 7mm o	or 9.5m	m high,		AC adapter	45W or 65W slim tip AC adapter			
	Some: SSD /			ide. 7mm h	niah (e.a	a. xxxGB S	SD)	Operating system	One of the following, configurable by model:			
	Some: M.2 S	SD / PCI	NVMe, PC	le 3.0 x 2, 1	6Gb/s		,		Windows® 7 Professional 64 preinstalled through downwards rights in Windows 10 Pro 64			
	Some: 128GI				WAN sl	ot as 2nd S	torage,		through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64			
Optical	None mutua	llly exclus	ive with WW	AN					• Windows 10 Pro 64			
Ethernet	Non-vPro mod	del: Intel E	thernet Con	nection I21	9-V (Ja	cksonville)		Limited warranty	One of the following, configurable by model:			
	vPro model:		thernet Con				e)		1-year depot repair service3-year/1-yr battery depot repair service			
WLAN	One of the follow	ving, config	urable by mod	del:					3-year/1-yr battery limited onsite service			
	Realtek® RT Intel Duel Re	L8822BE	Wi-Fi 2x2 8	02.11ac + E	3T4.1, I	M.2 card	M 2 oord	Mil-Spec test	MIL-STD-810G military testing			
	Intel Dual BaIntel Dual Ba							Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Bluetooth™	Bluetooth 4.1 * Intel 8260ac /	wireless,	ntegrated in	Wi-Fi + ΒΙι	uetooth	combo ada	pter	LIMIOIIIIEII	LI LAI GOIG (05 01119), LINERGT STAR 0.1, ROLIS-COMPIGNIC			
					ted to B1	T4.1 by Windo	ows OS					
Note: The specif	ications above ma	y not be a	/ailable in all	regions.					Lenovo			









ThinkPad L480 Platform Specifications

Processor	7th Gener	ation I	ntel® Cor	e™ i3 / i5 P	rocessor o	r			WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads		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,
	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	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
	i5-7300U	l		2.6 GHz	3.5 GHz	ЗМВ			Dimensions	WxDxH: 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
	Processor		ntel Core	i3 / i5 / i7 l	1		Managani	D	Weight Case color	Starting at 3.71 lb / 1.68 kg Black
	Number	# of Cores		Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Case material	PC/ABS plastic
	i3-8130U i5-8250U i5-8350U i7-8550U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz	4MB 6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	Smart card reade Media reader Ports	r Optional: Smart card reader 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),
		is NOT	 available i	n US and El		BINIB			1	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.
Graphics	Intel HD G Intel HD G AMD Rad (discrete r	araphic araphic eon 53 nodels	es 620 or es 620 or 60, 2GB (are NOT	Intel UHD Intel UHD GDDR5 me available	Graphics 6. Graphics 6. mory in EMEA);	20 in p	rocessor on rocessor an		Monitor cable (optional)	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
	supports t	hree in	ndepende	ent displays	HDMI or Û ;; (USB Type-	•		30Hz (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 /
Chipset Memory	32GB max	x / 240	OMHz DE	p) platform DR4, dual-cocessors with	channel cap o lower memo	able, to	wo DDR4 S roller	O-DIMM sockets		stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
Display	22	20 nits,	16:9 asp	ect ratio, 5	00:1 contra	st ratio			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)	25	50 nits,	16:9 asp	ect ratio, 8		ist ratio	LED backlig b, 170° view			Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Storage	Some: H	DD/S	ATA 6.00	3b/s, 2.5" w		nigh, Ad	ctive Protect	ion System™	Fingerprint reader	r <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard bezel, anti-spoofing technology Near Field Communication
	Some: M Some: 12	1.2 SSE 28GB N) / PCIe I M.2 SSD	NVMe, PCI / PCIe NVI	e 3.0 x 2, 1 Me, PCle 3	6Gb/s .0 x 2,			Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optical	in None	WWAI	N slot as	2nd Storag	ge, mutually	exclus	sive with WV	VAN	Max battery life	MobileMark® 2014: 12.2 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet		model	: Intel Eth	nernet Con	nection I21	9-V (Ja	cksonville)		AC adapter	45W or 65W USB Type-C AC adapter
	vPro mod	el:	Intel Eth	nernet Con	nection I21		Jacksonvilĺe)		Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (optional)	 Realtek® Intel Dua 	RTL8 al Banc	822BE, V Wireles	s-AC 8265,	02.11ac + E Wi-Fi 2x2	802.11	oth 4.1, M.2 ac + Blueto Windows OS	card (US only) oth 4.1, M.2 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
Note: The specifica									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant







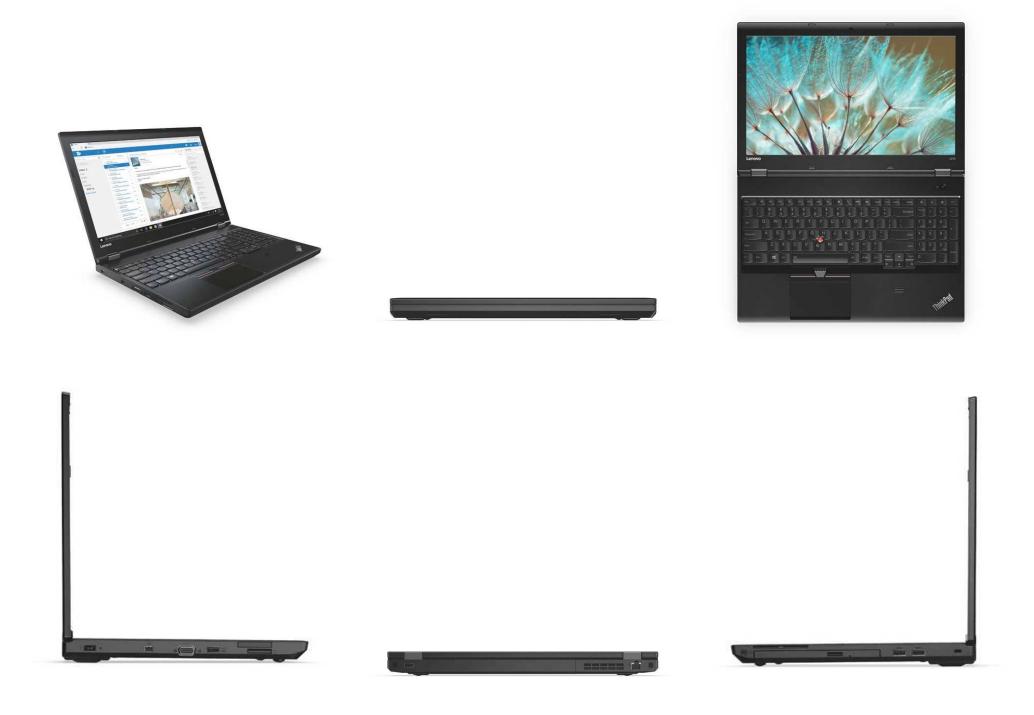






ThinkPad L490 Platform Specifications

Processor	Intel® Cele	eron® F	rocesso	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	7 Proces	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 PC/ABS plastic
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133		HD Graphics 610	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	1	ID 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 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 nodels externa hree ir	nics 620 in are NOT al digital r ndepende	available i nonitor via ent displays	and AMD n EMEA); HDMI or U ;	Raded 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-DIMI due to Ini	M sockets tel 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 Gamu			stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	14.0" HD (14.0" FHD			N Anti-glare		16:9		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 ges	,					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. 0 SSD	0Gb/s, 2. / PCle N	.5" wide, 7n 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 match on chip fingerprint reader on the palm rest Near Field Communication
Optane™ memory Optical	* Installed I	И.2 228	0 SSD is I	Cle 3x4 but	run at PCIe	<i>3x2 due</i> Cle 3.0	e to M.2 SSD) x 2	adapter	limitation	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 12 hr
Ethernet				nernet Conr			cksonville) Jacksonville	.\		AC adapter	**Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WLAN +				rable by mod		9-∟ıvı (Jacksonville	:)		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (optional)	 Realtek® (NOT av Intel Wir 	RTL8 ailable eless-	822BE, V in EMEA AC 9260,	Vi-Fi 2x2 8(\) Wi-Fi 2x2 8)2.11ac + E 302.11ac +	Blueto		card		1	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
VAUVA NI (antional)			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing
WWAN (optional)	WirelessIntegrateIntegrate* For non-V	WAN d Mob	upgradal ile Broad	ole Iband 4G L	ΓΕ, Fiboco	m L83(com L8 VWAN ເ	0-EB, M.2 ca 350-GL, M.2 ppgradable	ard (EM card	IEA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
SIM card Note: The specifica	None	n may r	not bo ava	ilablo in all r	ogione						Lenov



ThinkPad L570 Platform Specifications

Processor	6th Gener	ation Ir	ntel® Cor	e™ i3 / i5 /	i7 Processo	or or			WWAN (optional)	One of the following, configurable by model:
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor		Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A,
	Number i3-6006U	Cores	Threads	Frequency 2.0 GHz	Frequency -	3MB	Types	Graphics		Qualcomm [®] Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card
	i3-6100U			2.3 GHz	-	3MB				 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only)
	i5-6200U			2.3 GHz	2.8 GHz	3MB	DDD4 0400	Intel HD Graphics	SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card
	i5-6300U	2	4	2.4 GHz	3.0 GHz	3MB	DDR4-2133	520	Dimensions	WxDxH: 14.84" x 10.04" x 1.08-1.21"; 377mm x 255mm x 27.6-30.85mm
	i7-6500U			2.5 GHz	3.1 GHz	4MB			Weight	Starting at 5.25 lb / 2.38 kg
	i7-6600U			2.6 GHz	3.4 GHz	4MB			Case color Case material	Black PC/ABS plastic
						I Core	i3 / i5 / i7 P			t)One slot (ExpressCard/34)
	Processor Number	# of	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Smart card reade	er Optional: Smart card reader
		00163				21.15	Турез	Intel HD Graphics	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)
	Cel 3965U		2	2.2 GHz	-	2MB		610	Ports	Four USB 3.1 Gen 1 (USB 3.0, one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector
	i3-7100U			2.4 GHz	-	3MB				* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i5-7200U	2	4	2.5 GHz	3.1 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics	Monitor cable	Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable (MiniDP to DP)
	i5-7300U i7-7500U		4	2.6 GHz 2.7 GHz	3.5 GHz 3.5 GHz	4MB		620		/)HD720p resolution, fixed focus
	i7-7600U			2.8 GHz	3.9 GHz	4MB			Audio support	HD Audio, Realtek® ALC3245 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack
	* i7 process	or is NO	OT availab	le in EMEA				<u> </u>	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad
Graphics	Intel HD G	iraphic	s 520, 61	10, o <u>r</u> 620 i	n processo	r only;			UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	supports t					digital r	nonitor via	Mini DisplayPort;	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
						P cable	e); 1920x12	200@60Hz (VGA)	vPro (optional)	Intel vPro Technology
Chipset	Intel SoC	(Syster	m on Chi	p) platform	<u> </u>		,,	,	Fingerprint reade	r Optional: Swipe style fingerprint reader on the palm rest
Memory					hannel cap			O-DIMM sockets	NFČ '	None
Display							D backlight,		Battery Max battery life	Li-ion 6-cell (48Wh) MobileMark® 2014: 14.8 hr
Display					50:1 contra			,	1	* Battery life varies significantly with settings, usage, & other factors
	Some: 15	.6" (39	6mm) Fi	HD (1920x1	1080), anti-	glare, L	ED backlig	jht,	AC adapter	45W slim tip AC adapter
	Some: 15	'U nits, 5 6" <i>(</i> 39	16:9 asp 6mm) Fl	ect ratio, 4 HD (1920x1	00:1 or 500 (080) anti-):1 con glare l	trast ratio _ED backlig	tht IPS	Operating system	one of the following, configurable by model: • Windows® 7 Professional 64 preinstalled
	25	0 nits,	16:9 asp	ect ratio, 6	00:1 contra	st ratio	, 160° view	ring angle		through downgrade rights in Windows 10 Pro 64
Multi-touch	None									Windows 10 Home 64
Storage	Some: HI	DD / S	ATA 6.0G	ib/s, 2.5" w	ide, 7mm h	igh, Ac	tive Protect	tion System™		• Windows 10 Pro 64
	Some: M	של / של 2 SSE.) / PCle N	NVMe. PCI	e 3.0 x 2, 1	igii (e.(6Gb/s	g. xxxGB S	5D)	Limited warranty	One of the following, configurable by model: • 1-year depot repair service
	Some: 12	28GB N	1.2 SSD	/ SATA 6.0	Gb/s, in WV	VAN sl	ot as 2nd S	Storage,		3-year/1-yr battery depot repair service
Optical (optional)	DVD-BOV	utually Lor DV	exclusive	e with WWA	AN n fixed not	romov	able trav-ir	,		3-year/1-yr battery limited onsite service
Ethernet					nection I21				Mil-Spec test	MIL-STD-810G military testing
Lincinot	vPro mode						Jacksonville	e)	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
WLAN	One of the	following	g, configui	able by mod	lel:					
	Realtek®	RTL8	822BE, V	Vi-Fi 2x2 80	02.11ac + E	3T4.1, I	M.2 card (U	IS only)		
							ac + BT4.1, ac + BT4.1,			
Bluetooth™	Bluetooth	4.1 wir	eless, int	tegrated in	Wi-Fi + Blu	etooth	combo ada	opter		
N . TI						ed to B1	74.1 by Windo	ows US		<u> </u>
Note: The specific	ations above	may n	ot be ava	ııable ın all ı	regions.					Lenovo



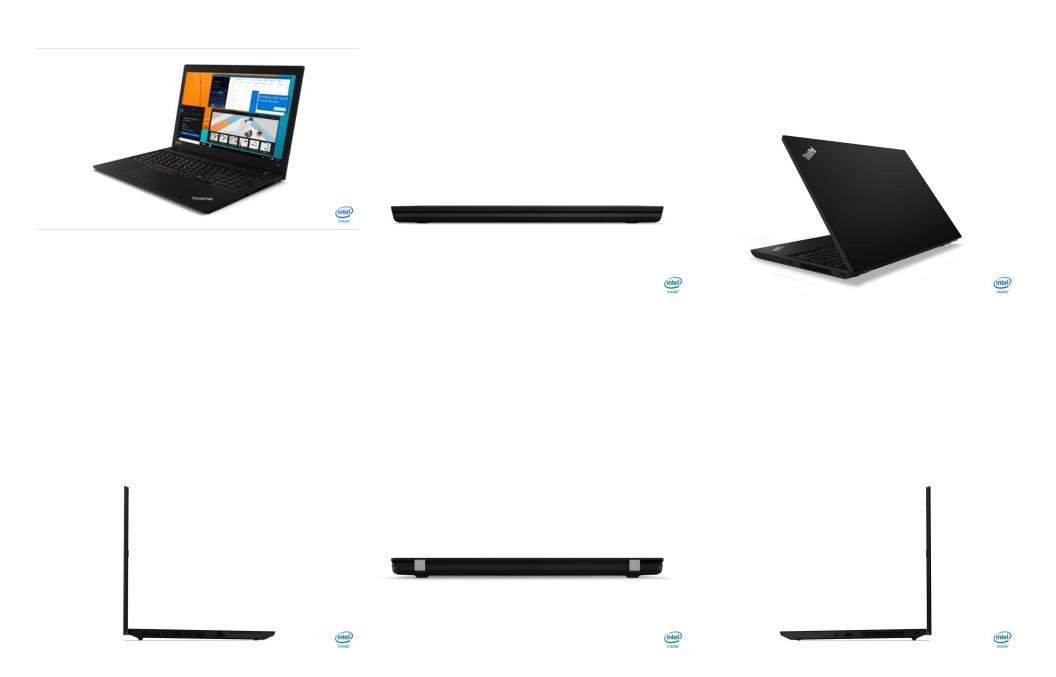






ThinkPad L580 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor Number	# 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)
	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 i3-7130U	2		2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U		4	2.5 GHz	3.1 GHz	3MB		620	Dimensions Weight	<i>WxDxH</i> : 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm Starting at 4.46 lb / 2.0 kg
	i5-7300U	ation I	otal Cara	2.6 GHz	3.5 GHz	3MB			Case color Case material	Black PC/ABS plastic
	8th Genera Processor	# of	# of	Base	Max Turbo		Memory	Processor	ExpressCard	None
	Number	-	_	Frequency	Frequency	Cache	Types	Graphics	Smart card reade Media reader	r <i>Optional:</i> Smart card reader MicroSD card reader
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB			Ports	Two USB 3.1 Gen 1 (one Always On),
	i5-8250U i5-8350U	4	8	1.6 GHz 1.7 GHz	3.4 GHz 3.6 GHz	6MB 6MB	DDR4-2400	Intel UHD Graphics 620		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),
	i7-8550U			1.8 GHz	4.0 GHz	8MB				headphone / microphone combo jack, optional smart card reader,
				n US and EN						microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics		raphic	s 620 or	Intel UHD	Graphics 6		in process ocessor an		Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	AMD Rade (discrete m									HD720p camera, fixed focus
	supports e	externa	ıl digital n	nonitor via	HDMI or Ú	SB Typ	e-C;		Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /
						-C); 40	96x2160@3	30Hz (HDMI)	-	dual array microphone, headphone / microphone combo jack
Chipset	Intel SoC (. .	DDD40	0.0000	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Memory	* System cla	ocks do	own for pro	cessors with	nannei cap <i>lower mem</i>	oable, iv	vo DDR4 S oller	O-DIMM sockets	Security	Power-on password, hard disk password, supervisor password, security keyhole
Display	Some: 15	.6" (39	6mm) HI	D (1366x76	88), anti-gla	are, LE	backlight,		Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology
	Some: 15	.6" (39	96mm) FH	ect ratio, 5 HD (1920x	1080), anti-	glare, L	ED backlig	ht, IPS,		r Optional: Touch style match on chip fingerprint reader on the palm rest,
Multi-touch	25 None	0 nits,	16:9 asp	ect ratio, 8	00:1 contra	ast ratio	, 170° view	ing angle	NFC (optional)	anti-spoofing technology Near Field Communication
Storage	System has	one HI	DD slot or	one M.2 228	30 slot exclus	sively for	storage		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- · · · · · · · · · · · · · · · · · · ·								ion System™	Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 12 hr
	Some: SS						J. XXXGB SS	SD)	,	* Battery life varies significantly with settings, usage, & other factors
	Some: 12	28GB N	M.2 SSD	/ PCIe NVI	Me, PCIe 3	.0 x 2,	I6Gb/s, ive with WV	WANI	AC adapter	45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Optical	None	V V V V \	N SIOT as	Ziid Storag	je, mutuan	CACIUS	IVE WILLI VVV	VAIN	Limited warranty	One of the following, configurable by model:
Ethernet	Non-vPro							`		1-year depot repair service
WLAN +	vPro mode	_				9-LM (lacksonville)		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Bluetooth™	 Realtek® 	RTL8	822BE, V	Vi-Fi Źx2 80	02.11ac + E			card (US only)	Mil-Spec test	MIL-STD-810G military testing
(optional)	 Intel Dua * Intel 8265 							oth 4.1, M.2 card	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specific	vatione abovo	may n	ot he ava	ilahla in all	ragione					Lenovo



ThinkPad L590 Platform Specifications

Processor	Intel® Cele	eron® F	rocesso	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	7 Proces	sor	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		cessor aphics	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		D Graphics 610	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),
	i5-8265U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	1	D Graphics	5	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			620		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.
Graphics	Intel UHD Intel UHD (discrete r supports e supports t	Graph nodels externa hree in	nics 620 in are NOT al digital r ndepende	available i nonitor via ent displays	and AMD n EMEA); HDMI or U	Raded 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 k / 240 memory	m on Chi 0MHz DI 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	/ I sockets el limitation	''	 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			stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	15.6" HD (15.6" FHD			N Anti-glare S Anti-glare		16:		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
Ü	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 <i>Optional:</i> Touch style fingerprint reader on the palm rest Near Field Communication
Optane™ memory	* Installed N	N.2 228	0 SSD is I	Cle 3x4 but	run at PCIe	3x2 due	to M.2 SSD	adapter li	limitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optical	None		plane m			010 0.0	, , <u>, , , , , , , , , , , , , , , , , </u>			Max battery life	<i>MobileMark</i> ® <i>2014:</i> 12 hr
Ethernet	Non-vPro			nernet Conr			cksonville) Jacksonville	.)		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WLAN +				rable by mod		O LIVI (Jacksonville	')			Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (optional)	(NOT av	ailable eless- <i>l</i>	in EMÉ. AC 9260,	۸) Wi-Fi 2x2 8	302.11ac +	Blueto		card			One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing
	WirelessIntegrate* For non-W	WAN ed Mob	upgradal ile Broad	ole Iband 4G L	ΓΕ, Fiboco	m L83(com L8 VWAN ເ	0-EB, M.2 ca 850-GL, M.2 pgradable	ard (EME card	EA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
SIM card Note: The specifica	None	movin	ot be ave	ilablo in all r	agions						Lenov





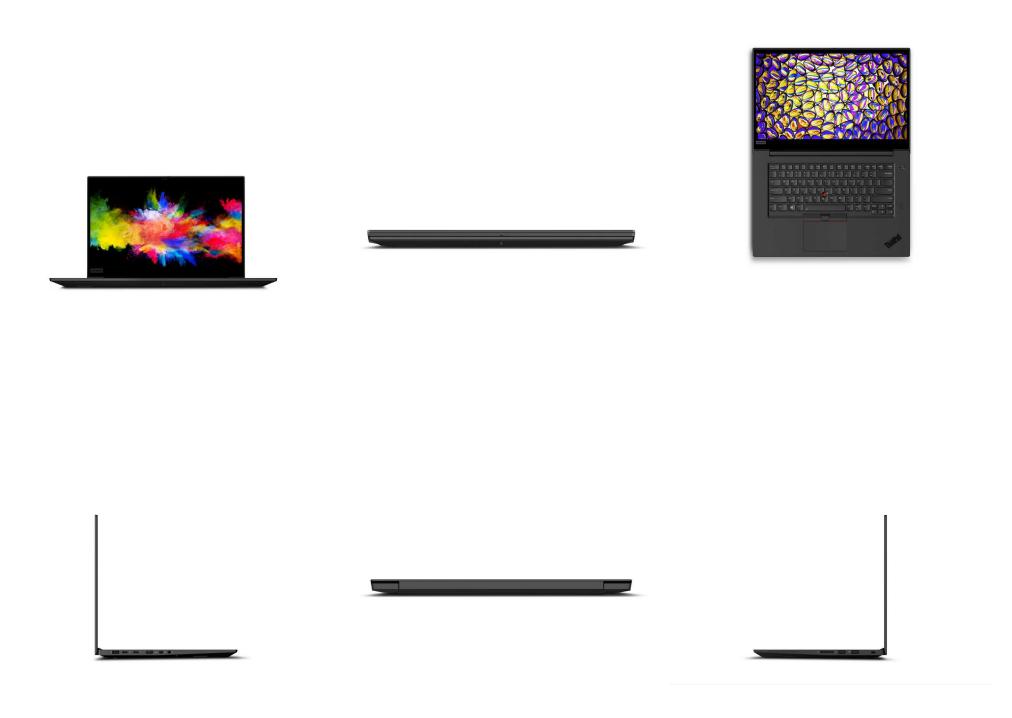




ThinkPad P1 Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor or Intel Xeon® E Processor	Smart card reader Optional: Smart card reader
	Processor # of # of Base Max Turbo Cache Types Processor Types Graphics	ExpressCard None Media reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Ports Two USB 3.1 Gen 1 (one Always On).
	i5-8400H 4 8 2.5 GHz 4.2 GHz 8MB i7-8750H 2.2 GHz 4.1 GHz 9MB i7-8850H 6 12 2.6 GHz 4.3 GHz 9MB DDR4-2666 DDR4-2666	
	E-2176M 2.7 GHz 4.4 GHz 12MB Intel UHD Graphics P630	
Graphics	Intel UHD Graphics 630 or P630 in processor and NVIDIA® Quadro® P1000 or P2000, 4GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt®:	(optional) USB-C to DP: Lenovo USB-C to DisplayPort Adapter Bundled Accy Optional: ThinkPad Ethernet Extension Cable
	supports external digital monitor via HDMI of Thuriderbolt , supports four independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (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	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, ECC or non-ECC (ECC function supported only on Xeon processor), dual-channel capable, two DDR4 SO-DIMM sockets	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	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio,	Keyboard 6-row, spill-resistant, multimedia Fn keys, LED backlight UltraNav™ TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	72% gamut, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1200:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch, anti-reflection (AR)	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Multi-touch (opt) Pen	Capacitive-type multi-touch, supports 10-finger gesture (4K only) Supports pen accessory, please see the accessory compatibility for details	Fingerprint reader Touch style match on chip fingerprint reader on the keyboard bezel Color calibration None NFC None
Storage RAID (optional) Optical	Up to 2 drives (two M.2 SSD) M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s RAID 0/1 support None	Battery Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Max battery life Discrete mode: 7.36 hr; Hybrid mode: 13.87 hr (MobileMark 2014) * Battery life varies significantly with settings, usage, & other factors AC adapter 135W slim tip AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>)) via bundled or optional ThinkPad Ethernet Extension Cable	Operating system One of the following, configurable by model: • Windows® 10 Home 64
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	Windows 10 Pro 64 Windows 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): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm	 1-year depot with 2-year planar repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Weight	Non-touch model: starting at 3.76 lb / 1.7 kg; Multi-touch model: starting at 4.06 lb / 1.8 kg	Mil-Spec test MIL-STD-810G military testing
Case color Case material	Black Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy	Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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



ThinkPad P1 (2nd Gen) Platform Specifications

Processor						cessor or I					Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Processor Number	# of Cores	# of Threads	Base Frequen		Turbo Jency Cach		emory /pes	Proce: 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
	i5-9400H i7-9750H	6	12	2.5 GH 2.6 GH	z 4.5 (GHz 8ME	3	Ir	ntel UHD		Case color Case material	Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid;
	i7-9850H i9-9880H	6 8	12 16	2.6 GH 2.3 GH	_		—111111	4-2666	630	J	Consult soud woods	Bottom: Aluminum alloy
	E-2276M	6	12	2.8 GH		GHz 12ME	_	Ir	ntel UHD (P63		Media reader Ports	er <i>Optional:</i> Smart card reader 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		Graph Quadro externa our inc ution:	nics 630 d T1000 al digital r depender 5K@60H	or P630 i or T2000 monitor v nt display Iz (Thund	n procés , 4GB G ia HDMI s:	ssor and SDDR5 me	erboĺt [™]				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 USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Memory	Mobile Int 64GB max	x / 266	6MHz Ď[DR4. EC	or non	n-ECC (EC	C fund	ction sup	ported o	nly on	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable
Disales	Xeon prod	cessor)	, dual-ch	annel ca	pable, tv	wo DDR4 S					Camera (optional)	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Display	Size Reso	lution		Type Su	rface [Brightness	Aspect Ratio	Contrast Ratio	Gamut	Viewing Angle	Audio support	• IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	15.6" FHD	(1920x	1080)	IPS An	i-glare	300 nits	16:9	700:1	72% NTSC	170°	Addio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
	15.6" HDR	(1920x 400, y Vision	′	IPS An	i-glare	500 nits	16:9	1200:1	72% NTSC	170°	 Keyboard	dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system 6-row, spill-resistant, multimedia Fn keys, LED backlight
	UHD 15.6" HDR	(3840x	2160)	IPS An	i-glare	500 nits	16:9	1200:1	100% Adobe	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
	UHD HDR Dolby	(3840x	2160) ue Black,	OLED A	R, AS	SDR 400nit, HDR 500nit (peak)	16:9	100000:	1 100% DCI-P3	170°	Fingerprint readé	
Multi-touch (opt)	Capacitive anti-reflec						ure (Ul	HD OLE	D only),		NFC Battery	None Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Pen						ung accessory	compa	tibility fo	r details		Max battery life	MobileMark® 2014: 13.8 hr
Storage	<i>Up to two N</i> M.2 2280			Maany	1						AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
RAID <i>(optional)</i> Optical	RAID 0/1 None			IVIC J.U A	7						Operating system	One of the following, configurable by model: • Windows® 10 Home 64
Ethernet	Native Inte	el Ethe	rnet Con ptional Th	nection I ninkPad I	219-V (<i>l</i> Ethernet	<i>Non-vPro</i>) t Extensior	or I219 Cable	9-LM (<i>vl</i> e	Pro))]	Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
WLAN Bluetooth™						Bluetooth + Bluetoot		ıbo adap	ter		Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year planar repair service
WWAN SIM card	None None											 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 Generation Intel® Co	ore™	i7 Proces	sor					Dimensions	WxDxH:	12.95" x 8.94" x 0	.70"; 329mm x 227r	mm x 17.9mm
	Processor # of # of		Base N	Max Turbo	ache	Memory	Proces		Weight	Models	FHD	FHD Low Power	WQHD
	Number Cores Thread			requency		Types	Graph		ļ	Weight	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg
	i7-8565U 4 8	_			BMB D	DR4-2400 Inte	el UHD (620		Case color Case material	Black Display con Bottom:	over: PPS / 50% GI PA / 50% GF	Ξ;	
	Intel UHD Graphics 620 NVIDIA Quadro® P520, supports external digita supports three indepen- Max resolution: 3840x2	2GB I mor dent 2160@	GDDR5 r nitor via H displays; @60Hz (U	nemory; DMI or USE			OMI)		Smart card reade Media reader Ports	r Optional: MicroSD Two USB one USB	Smart card reader card reader 3.1 Gen 1 (one Alw 3.1 Type-C Gen 1 (v	vith the function of Po	ower Delivery and DisplayPort ne function of PD and DP),
Chipset Memory	Intel SoC (System on C 48GB max / 2400MHz I 8GB or 16GB memory s * Installed memory is actual	DDR2 solde	4, dual-cha ered to sys	temboard.	one DE	DR4 SO-DIM e to Intel limitat	M sock	et		HDMI 1.4 headphor microSD * Dependir	b, Ethernet (RJ-45), ne / microphone con card reader, side do ng on many factors, act	nano-SIM card slot (nbo jack, optional sma cking connector, secu ual data transfer speed i	WWAN models), art card reader, urity keyhole may be lower than theoretical spe
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio		Viewing Angle	Monitor cable (optional)	USB-C to	VGA: Lenovo USE	II to VGA Monitor Ad B-C to VGA Adapter B-C to HDMI Adapter	apter
	14.0" FHD (1920x1080)	IPS	Anti-glare	250 nits (non-touch) 300 nits (multi-touch)	16:9	700:1	45%	170°	Bundled Accy	USB-C to None	DP: Lenovo USE	3-C to DisplayPort Ad	apter
	14.0" FHD (1920x1080) Low Power		Anti-glare	400 nits	16:9	800:1	72%	170°	- Camera (optional,	 HD720r 	following, configurable camera with Think	Shutter camera privad	cy, fixed focus er camera privacy, fixed focus
	14.0" WQHD (2560x1440) Dolby Vision™ HDR	IPS	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	HD Audio	, Realtek® ALC3287 eakers, 2W x 2, Doll	′ codec / oy® Audio™ Premium	1
	On-cell touch, supports	10-fi	nger gesti	ure (FHD o	nly)							e, headphone / micro	,
Pen Storage	None • M.2 2280 SSD / SATA	6.00	⊋h/e						_Keyboard UltraNav™			dia Fn keys, LED bac nd buttonless Mylar si	klight urface multi-touch touchpad
3	 M.2 2280 SSD / PCle M.2 2242 SSD / PCle Intel Optane™ Memor M.2 2280, PCle NVM 	NVN NVN y H1	Me, PCIe 3 Me, PCIe 3 0 with Sol	3.0 x 2	orage,				Security Security chip System Mgt (opt)	Power-on Discrete Intel vPro r Optional:	password, hard dis FPM 2.0, TCG Certif Technology	k password, supervise ied	or password, security keyhole
Ethernet	Non-vPro model: Intel E vPro model: Intel E			ection I219- ection I219-					Battery Max battery life	MobileMa	ark® 2014: 14.7 hr		arge (charge up to 80% in 1h
WLAN Bluetooth™	Intel Wireless-AC 9560, Bluetooth 5.0 wireless,						r		AC adapter	65W UŚE	Type-C AC adapter		ther factors
	One of the following, config			:							10 Home 64 or Wi		
	 Wireless WAN upgrad Integrated Mobile Bro. Integrated Mobile Bro. *For non-WWAN model, it Nano-SIM card slot, opi 	adba adba <i>mear</i>	nd 4G LTE nd 4G LTE ns the mode	E-A, Fiboco el is NOT WM	m L850 IAN upg	0-ĜL, M.2 ca gradable		only)	Limited warranty	 1-year of the second	following, configurable depot repair service I-yr battery depot re I-yr battery limited o	pair service nsite service	
(Trano-onviolato siot, opi	ioriai	I VOIIZUII L	.1 = (00) 31	ivi calu				Mil-Spec test		810G military testin	<u> </u>	
	tions above may not be a								Environment	EPEAT™	Silver; ENERGY ST	AR® 7.1; RoHS-comp	liant

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



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		1	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	-1		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 0110	Mini DisplayPort	1.2a. HDMI 1.4b. Eth	ernet (RJ-45), Dock	connector	
Graphics	Intel HD Gra					essor and					ansfer speed may be lo	wer than theoretical speed	
	supports ext	ernal d ir indep	ligital mo endent o	nitor via HE lisplays;	MI, Mini Ďi	splayPort, or ī a Mini Display	Thunderbolt™;	Camera (optional Audio support	'x2/				
	Max resoluti	38	40x2160 40x2160	@60Hz (Th	iunderbolt);	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			<u> </u>	vord security keyhole	
	* System cloc						ockeis	Security chip Discrete TPM 2.0, TCG Certified					
Display							ght, IPS, 250 nits,	vPro (optional)	Intel vPro Techno	ology h on chip fingerprint ı	roador on the nalm re	net	
						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-ty	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				touch displa	ay		Max battery life ¹⁰ (MobileMark® 2014)	Model	4-cell	6-cell		
Storage	Up to 3 drives				7mm high	Active Protec	tion System™	(WODIIEWAIK 2014)	Discrete drapines	4.5 hr	6.1 hr		
	Some: M.2						dion System		Hybrid Graphics	6.5 hr	8.9 hr	70	
RAID (optional)	RAID 0/1 su	pport		•	•			AC adapter	170W slim tip AC		js, usaye, & olilei laciol	5	
Optical	None	1 - 1 - 1 - 1 - 1	4-1 = 4		1040 V	/	<u> </u>	Operating system	One of the following	g, configurable by model	:		
Ethernet	Non-vPro m vPro model:	<i>odel:</i> Ir Ir	itel Ethei Itel Ethei	net Connec	tion 1219-V	(Jacksonville M (Jacksonvill) e)		 Windows® 7 Pro 	ofessional 64		0.4	
WLAN	One of the foli				DIIOII IZ IO Z	ivi (odokoorivii	<u> </u>	-	Windows® 10 H	ough downgrade right	s in Windows 10 Pro	64	
* * L/\ \	 Intel Dual I 	Band W	/ireless-/	AC 8260, W		2.11ac + BT4.1			 Windows 10 Pro 	o 64			
Divists at hTM						2.11ac + BT4.				o 64 for Workstations			
Bluetooth™	* Intel 8260ac	ı wirele :/ <i>8265a</i>	ess, integ ac card su	grated in Wi oport BT4.2 b	-rı + Biueto out is limited t	oth combo ad to BT4.1 by Wind	apter dows OS	Limited warranty		g, configurable by model	:		
WWAN (optional)						.,		1	1-year depot re3-year/1-yr batt	pair service ery depot repair serv	ice		
(Wireless V 	VAN up	gradable	;						tery limited onsite ser			
	Integrated Ouglcomm					eless EM745	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	TAR® 6.1; RoHS-com	pliant	
Note: The specification			<u> </u>	· ·		vo Connect (LIVILA) SIIVI CATO	Livilolillelit	LI LAI ··· Gold (U	o omy), ENERGT 3	IAIT 0.1, NOTIS-COIII	pliarit	

September 2018



ThinkPad P52 Platform Specifications

Processor	8th Gener	ation I	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	Base Frequency	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	Black Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum
	E-2176M			2.7 GHz	4.4 GHz	12MB		Intel UHD Graphics P630	ExpressCard	r <i>Optional:</i> Smart card reader None
	NVIDIA Q P3200 (60 supports 6 supports f	uadro® GB mer externa our ind ution:	P1000 (4 mory, VR al digital n dependen 3840X21 5120X28	monitor via it displays; 60@60Hz 80@30Hz	ry), P2000 HDMI, Min (DisplayPo	(4GB i Displa rt via M	ayPort, or T Iini 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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Memory	128GB no only on Xe * Installed I	on-ECC eon pro	or 64GE ocessor), are actuall	B ECC max	nel capable out run at 24	e, four D	DDR4 SO-[ction supported DIMM sockets limitation	Camera (optional) - Audio support	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus R camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Display	30	00 nits,	16:9 asp	HD (1920x1 bect ratio, 7 viewing an	00:1 contra	glare, I ast ratio	_ED backli o,	ght, IPS,	- Addio Support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
	Some: 15 40	5.6" (39 00 nits,	96mm) 4k 16:9 asp	Viewing and K (3840x21 pect ratio, 1 of viewing a	60), anti-gl 000:1 cont	rast rat	D backligh	t, IPS,	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	Capacitive Supports	e-type i pen ac	multi-toud cessory,	ch, support please see	s 10-finger the acces	gestur			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
	Some: Some:	HDD / M.2 S	SATA 6.0 SD / PCIe	e NVMe, P0	wide, 7mn Cle 3.0 x 4	, 32Gb	/s	ection System™	Color calibration	Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest None Near Field Communication
Optane™ memory RAID <i>(optional)</i> Optical	RAID 0/1 None	suppor	ptane me rt	emory, PCI	e invivie, P	Cle 3.0) X 2		Battery Max battery life	Swappable Li-ion 90Wh battery Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr
Ethernet	Non-vPro vPro mod			nernet Coni nernet Coni					AC adapter	* Battery life varies significantly with settings, usage, & other factors 170W slim tip AC adapter
WLAN Bluetooth™				Vi-Fi 2x2 80 tegrated in					Operating system	One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64
WWAN (optional)	Integrated Intel XMM	l Mobile	e Broadb	and 4G LTI m L850-GL	E-A, .). M.2 card	H				Windows 10 Pro 64 for Workstations
SIM card (opt)	Nano-SIM	card s	slot, optio	nal Verizon	LTE (US)	SIM ca	ırd		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® 6.1; RoHS-compliant

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









ThinkPad P52s Platform Specifications

Processor	8th Generation	Intel® Cor	e™ i5 / i7 F	rocessor				Dimensions	<i>WxDxH:</i> 14.40" x 9.95" x 0.79-0.80": 365.8mm x 252.8mm x 19.95-20.2mm
	Processor # of	# of	Base Frequency 1.7 GHz 1.8 GHz	Max Turbo Frequency 3.6 GHz 4.0 GHz	6MB	Memory Types	Processor Graphics	Weight Case color Case material	starting at 4.39 lb / 1.99 kg Black Display cover: Glass-Fiber Reinforced Plastic (PPS); Bottom: Glass-Fiber Reinforced Plastic
Graphics	i7-8650U Intel UHD Graph NVIDIA Quadro supports externs supports three in	P500, 2 al digital i ndepende	GB GDDR: monitor via ent displays	5 memory; HDMI or U s;	8MB JSB Typ	*	620	Smart card reade Media reader Ports	er Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) 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),
Chipset Memory	* System clocks de	em on Ch 00MHz DI own for pro	ip) platform DR4, dual-ocessors with	channel ca lower mem	pable, tv	wo DDR4 S roller	SO-DIMM sockets	Monitor cable	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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Display Multi-touch (opt)	Some: 15.6" (39	, 16:9 asp 96mm) U pect ratio,	ect ratio, 7 HD (3840x) 1000:1 coi	00:1 contra 2160), anti- ntrast ratio,	ast ratio -glare, L , 72% ga	, 170° view ED backlio	int, IPS, ing angle ght, IPS, 300 nits, viewing angle		USB-C to DP: Lenovo USB-C to DisplayPort Adapter I) One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Pen Storage	System has one H	dDD slot or	one M.2 22	80 slot exclu	sively for		tion System™	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	Some: SSD / S Some: M.2 SSI Some: 128GB	SATA 6.00 D / PCle M.2 SSD	ab/s, 2.5" w NVMe, PCI	ride, 7mm l le 3.0 x 2, Me, PCle 3	niğh (e.g 16Gb/s 3.0 x 2,	g. xxxGB S 16Gb/s,	SD) ´	Keyboard UltraNav™ Security Security chip	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 Discrete TPM 2.0, TCG Certified
Optane™ memory Optical Ethernet		Optane m	emory, PC	le NVMe, F	Cle 3.0	x 2	WAN	vPro <i>(optional)</i> Fingerprint reade	Intel vPro Technology er <i>Optional</i> : Touch style match on chip fingerprint reader on the palm rest anti-spoofing technology
	vPro model:	Intel Et	nernet Con	nection I21	19-LM (J	lacksonville	<u>′</u>	NFC (optional) Battery	Near Field Communication Optional integrated Li-ion 32Wh battery and
WLAN + Bluetooth™	Intel Dual Band * Intel 8265ac care	d supports	BT4.2 buť is	limited to B	02.11ac <i>T4.1 by V</i>	+ Bluetoo Vindows OS	th 4.1, M.2 card	Max battery life	swappable Li-ion 24Wh, 48Wh, or 72Wh battery Models
WWAN (optional)	One of the followingWireless WANIntegrated Mol	upgrada	ble					(MobileMark® 2014)	* Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3 hr * Battery life varies significantly with settings, usage, & other factors
	Intel XMM™ 72	262 (Fibo	com L830-l	EB), M.2 ca	ard (EM	EA only)		AC adapter	65W USB Type-C AC adapter n Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	Integrated Mol Intel XMM™ 73 * For non-WWAN Nano-SIM card	360 (Fibo	com L850-0 neans the mo	GL), M.2 ca odel is NOT l	WWAN u			Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year planar 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
Note: The enecifier	ations above may	not he ava	ilahla in all	regions				Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant Lenove













ThinkPad P53 Platform Specifications

Processor	9th Gener	ation I	ntel® Cor	e™ i5 / i7 /	9 Process	or or In	tel Xe	on® E Pr	rocesso	r	Dimensions	WxDxH (non-touch): 14.86" x 9.93" x 0.96-1.16";
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency		1	mory bes	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	8 12	2.5 GHz 2.6 GHz	4.3 GHz 4.5 GHz	8MB 12MB	-	l no	tal IIIID (Cranbias	Weight	Non-touch model: starting at 5.51 lb / 2.5 kg;
	i7-9750H	6	12	2.6 GHz	4.5 GHz	12MB	1		tel UHD (630		Case color	Multi-touch model: starting at 6.4 lb / 2.9 kg Black
	i9-9880H	8	16	2.3 GHz	4.8 GHz	16MB	-I II IK4	1-2666			Case material	Display cover: Glass-Fiber Reinforced Plastic;
	E-2276M	6	12	2.8 GHz	4.7 GHz	12MB		In	tel UHD (P63	Graphics 30	Smart card reade	Bottom: Magnesium/Aluminum er Optional: Smart card reader
	Intel UHD NVIDIA® (RTX 3000 RTX 5000 supports of supports of Max resol	Quadro (6GB (16GE externative ind	® T1000 GDDR6, B GDDR6 al digital r lependen	(4GB GDI VR ready 6, VR read nonitor via t displays;	PR5), T200 , RTX 400 /); HDMI, Mi	0 (4GB 0 (8GB ni Displ	GDDI ayPort	R6, VR r t, or Thu	nderbol		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
	Mobile Int 128GB ma dual-chan	ax / 26	66MHz C	DR4 (EC	C function of the contract of	support	ted onl	ly on Xe	on proc	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	lution		Type Surf	ace Brigh	tness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	15.6" FHD		,	IPS Anti-	glare 300	nits	16:9	700:1	72%	160°	Bundled Accy	None
	15.6" HDR	(1920x 400, y Vision	´	IPS Anti-	glare 500	nits	16:9	1200:1	72%	160°	Camera (optional)	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" HDR Dolby	y Vision	,	IPS Anti-	glare 500	nits	16:9	1200:1	100%	170°	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
	15.6" HDR Dolby	(3840x 500 Tru y Vision -touch	ue Bláck,	OLED AR,	AS (pe	nits eak nits)	16:9	100000:1	100% DCI-P3	170°	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 (opt) Pen	Capacitive anti-reflec	tion (A	R), anti-s	mudge (A		J	•	,,,			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	Up to 3 driv • HDD / S • M.2 228	∕es SATA 6.	.0Gb/s, 2	5" wide, 7	mm high, a		•				vPro (optional) Fingerprint readel Color calibration NFC (optional)	Intel vPro Technology rTouch 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	5 supp	ört	, ,							Battery Max battery life (MobileMark® 2014)	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 170W or 230W slim tip AC adapter
Ethernet	Non-vPro vPro mod				nection I2 nection I2						AC adapter Operating system	n One of the following, configurable by model:
Bluetooth™ (opt)	Intel Wi-Fi Bluetooth	5.0 wii	200, Wi-F reless, in	i 2x2 802. tegrated ir	1ax + Blu Wi-Fi + B	etooth !	5.0		er			Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
	WirelessIntegrate	s WAN ed Mob VWAN r	upgradal oile Broad <i>nodel, it m</i>	ole Iband 4G Jeans the m	TE-A, Fibodel is NOT	WWAN	upgrad	L, M.2 c	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
				المصنامات							Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant







ThinkPad P53s Platform Specifications

Processor	8th G	enerati	on Int	tel® Co	re™	i7 Proces	sor					Dimensions	<i>WxDxH</i> : 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm					
	Proce	er C	of ores 7	# of Threads	Fre	quency F	requency	Cache	Memory Types	Proce Grap	hics	Weight Case color Case material	starting at 3.87 lb / 1.75 kg Black Display cover: PPS / 50% GF;					
	i7-856		4	8	_			8MB 8MB	DDR4-2400	Intel UHD 62		S	Bottom: PA / 50% GF rOptional: Smart card reader					
Graphics	Suppo suppo Max i	A Quad orts extents orts three esolution	dro® Fernal ee ind on: 38	P520, 2 digital depend 840x21	MON MON lent of 160@	displays; 960Hz (U	nemory; DMI or US	• •	e-C; 60@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),					
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	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					
Display	Size	Resoluti	on	1	Туре	Surface	Brightness	Aspec Ratio	t Contrast Ratio	Color Gamut	Viewing Angle	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None					
	15.6"	FHD (19	20x10	080)	IPS	Anti-glare	250 nits	16:9	700:1	45%	170°	Camera (optional)	One of the following, configurable by model:					
	15.6"	UHD (38 Dolby V	340x2⁻ sion™	160) ' HDR	IPS	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec / 					
Multi-touch (opt) Pen	On-ce None		ı, sup	ports '	10-fir	nger gest	ure (FHD c	nly)					stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack					
	• M.2		SSD/	PCIe I	NVM	le, PCIe 3						Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backli UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
Optical	• Inte	Optan 2280,	е™ М	1emory	/ H10		id State St	orage,				Security Security chip System Mgt (opt) Power-on password, hard disk password, supervisor password, security k Discrete TPM 2.0, TCG Certified Intel vPro Technology						
Ethernet		Pro model:					ection I219-		cksonville) acksonville)			NFČ (optional)	r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication					
WLAN Bluetooth™	Intel \	Vireless both 5.0	S-AC () wire	9560, \ eless, ir	Wi-Fi	i 2x2 802 ated in W	.11ac + Blu /i-Fi + Blue	uetootl				Battery Max battery life AC adapter	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) 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					
WWAN (optional)		tne tolle eless W				by model	:						Windows® 10 Home 64 or Windows 10 Pro 64					
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 									rd (EME <i>l</i> card	A only)	I	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® 7.1; RoHS-compliant					

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











ThinkPad P72 Platform Specifications

Processor	8th Generation	Intel® Cor	e™ 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																				
	Processor # of Number Cores i7-8750H i7-8850H	# of Threads		Max Turbo Frequency 4.1 GHz 4.3 GHz	Cache 9MB 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																				
	E-2176M E-2186M	12	2.6 GHz 2.7 GHz 2.9 GHz	4.4 GHz 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	Intel UHD Grap NVIDIA Quadro P3200 (6GB me supports extern supports four in Max resolution:	P600 (4) emory), P4 al digital r dependen 3840X21 5120X28	GB memory 4200 (8GB i monitor via I nt displays; 60@60Hz (80@30Hz (y), P2000 memory), HDMI, Mir (DisplayPo	(4GB m or P520 ni Displa ort via N	00 (16GB r ayPort, or T Mini Display	Γhunderbolt™;		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	only on Xeon pr * Installed DIMMs	C or 64GE ocessor), are actuall	B ECC max dual-chann <i>y 2666MHz b</i>	nel capable out run at 2	e, four [400MHz	DDR4 SO-I due to Intel	limitation	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone																				
Display	16:9 asp Some: 17.3" (4	oect ratio, 39mm) 4k	800:1 contr	rast ratio, 30), anti-q	72% ga lare. LE	mut, 170° i D backligh	ght, IPS, 300 nits, viewing angle it, 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 Storage	None Supports pen ac Up to 3 drives (tw. Some: HDD / Some: M.2 S	wing angl ccessory, o M.2 SSD SATA 6.0	e please see and one HDD Gb/s, 2.5" v	the acces	ssory co	ompatibility Active Prote	for details	Fingerprint reader 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																				
Optane™ memor RAID <i>(optional)</i> Optical		Optane me						Battery Max battery life	Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 18 hr * Battery life varies significantly with settings, usage, & other factors																				
Ethernet	Non-vPro mode vPro model:							AC adapter Operating system	230W slim tip AC adapter n One of the following, configurable by model:																				
WLAN Bluetooth™	Intel Wireless-A Bluetooth 5.0 w						ntel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card cluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					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					Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card ooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					ess-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card					card		 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																				

May 2019











ThinkPad P73 Platform Specifications

Processor	9th Gener	ation I	ntel® Cor	e™ i5 / i7 / i	9 Processo	r or Inte	el Xeon® E	Process	or	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	Base Frequency	Max Turbo Frequency	Cache	Memory Types		essor phics	Weight Case color Case material	Starting at 7.5 lb (3.4kg) Black Display cover: GFRP + PPS;
	i5-9400H i7-9750H	4	8 12	2.5 GHz 2.6 GHz	4.3 GHz 4.5 GHz	8MB 12MB		Intel UHI	O Graphics		Bottom: Magnesium/Aluminum
	i7-9850H i9-9880H	6 8	12 16	2.6 GHz 2.3 GHz	4.6 GHz 12MB DDR4-2666 630		ExpressCard	or Optional: Smart card reader None			
	E-2276M	6	12	2.8 GHz	4.7 GHz	12MB			O Graphics 630	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), 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) 000 Ma externa ive ind	P620 (40 GDDR6, x-Q (160 al digital r lependen	GB GDDR VR ready) GB GDDR6 monitor via t displays;	orocessor a 5), T2000 (4 , RTX 4000 , VR ready) HDMI or The erbolt); 4K@	IGB GI Max-C ; nunderl	Q (8GÉ GE polt™;	,	ready),	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 Memory	dual-chan	ax / 26 nel car	66MHz D pable, fou	DR4 (ECC ur DDR4 SC	function so	ckets	-		cessor),	Bundled Accy Camera (optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None One of the following, configurable by model:
Display	Size Reso	lution	1	Type Surface	1	As As				Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 /
	17.3" FHD	(1920x	1080)	IPS Anti-gl			6:9 700:			-	dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
Multi-touch	None	/ Vision	™ HDR	IPS Anti-gl	are 400 n	its 1	6:9 1000	:1 100%	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and
Pen Storage Optane™ memor RAID (optional)	 HDD / S M.2 228 Y Optional: RAID 0/1 	ATÀ 6. 0 SSD Intel 0	.0Gb/s, 2) / PCIe N Optane m	IVMe, PCIe	nm high, A 3.0 x 4			ystem™		Color calibration	
Optical Ethernet	None Non-vPro vPro mode				nection I219					NFC (optional) Battery Max battery life	Near Field Communication Integrated Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 7 hr; Hybrid mode: 10 hr
WLAN Bluetooth™					1ax + Bluet Wi-Fi + Blu			apter		AC adapter	* Battery life varies significantly with settings, usage, & other factors 170W or 230W slim tip AC adapter
WWAN SIM card	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter None None									Operating system	 One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64 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
				ilable in all						Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant









ThinkPad T470 Platform Specifications

Processor	6th General	tion In	tel® Core	-™ i5 / i7 F	rocessor or				WWAN (optional)	One of the following, configurable by model (WWAN can coexist with WiGig):							
	Processor	Cores Threads Frequency Frequency Cache Types Graphics 2.3 GHz 2.8 GHz 3MB								 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card Integrated Mobile Broadband 4G LTE, 							
	i5-6300U i7-6500U i7-6600U	2	4	2.4 GHz 2.5 GHz 2.6 GHz	3.0 GHz 3.1 GHz 3.4 GHz	3MB 4MB	DDR4-2133	Intel HD Graphics 520	SIM card (opt)	Intel XMM™ 7160 (Fibocom L831-EAÚ), M.2 card (EMEA only) M card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card							
	7th General	tion In	tel Core			4IVID			Dimensions Weight	WxDxH: 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm Models 3-cell or 3 + 3-cell 6-cell or 3 + 6-cell							
		# 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 i5-7200U i5-7300U	2	4	2.4 GHz 2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics 620	Case color Case material	Black Display cover: Magnesium Hybrid or PPS; Bottom: Glass-Fiber Reinforced Plastic							
	i7-7500U i7-7600U			2.7 GHz 2.8 GHz	3.5 GHz 3.9 GHz	4MB 4MB		020	Media reader	er Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I							
	* i7-6500U is								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),							
Graphics	Intel HD Gra	aphics Iz GDI cternal	620 in p DR5 mei digital n	processor mory (disc nonitor via	rete models HDMI or US	GeFord are NO	T available	Κ, e in EMEA);	WiGig dock (opt) Monitor cable	HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed ThinkPad WiGig dock Optional: Lenovo USB-C to VGA Adapter							
	Max resolut	tion: 4	096x230	04@60Hz	(USB Type-0	C); 409	6x2160@	24Hz (HDMI)	Camera (optional	I) 720p: HD720p resolution, fixed focus IR & 720p: IR camera and HD720p camera (mutually exclusive with WiGig)							
Chipset Memory	Intel SoC (S 32GB max / * System close	/ 2400	MHz DD	Ŕ4, dual-d	i channel capa n lower memor	able, tw	o DDR4 S	O-DIMM sockets	Audio support	HD Audio, Realtek ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack							
Display	Some: 14.0	0" (355	<u>.</u> 5mm) HI	D (1366x76	68), anti-glar	re, LED			- Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad							
	Some: 14.0 220 Some: 14.0 250	0" (355)) nits, 7 0" (355)) nits, 7	5mm) Fh 16:9 asp 5mm) Fh 16:9 asp	HD (1920x) ect ratio, 4 HD (1920x) ect ratio, 7	1080), anti-g 00:1 or 500: 1080), anti-g 00:1 contras	glare, LE :1 contra glare, LE st ratio,	ast ratio ED backlig 170° view	ht, IPS, ing angle	Security Power-on password, hard disk password, supervisor password, security keyhole Security chip vPro (optional) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the keyboard bezel								
Multi-touch (opt)					sture (FHD 30 slot exclusi			PS cover only)	NFC <i>(optional)</i> Internal battery	Near Field Communication Optional: Integrated Li-Polymer 3-cell (24Wh)							
Storage	Some: HD	D/SA	TA 6.0G	ib/s, 2.5" w	ide, 7mm hi	igh, Acti	ive Protect	tion System™	External battery	Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)							
	Some: M.2	2 SSD	/ PCIe N	NVMe, PCI	ide, 7mm hi e 3.0 x 2, 16	6Gb/s		,	Max battery life (MobileMark® 2014	Models 3-cell 3 + 3-cell 6-cell 48Wh 6-cell 72Wh 3 + 6-cell 48Wh 3 + 6-cell 72Wh 11.0 11.							
					Gb/s, in WW AN and WiG		t as 2nd S	torage,		<i>Discrete</i> 6.9 hr 13.9 hr 14.3 hr 21.6 hr 21.2 hr 28.6 hr							
Optical	None								AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter							
Ethernet	Non-vPro n vPro model				nection I219 nection I219			e)	Operating system	One of the following, configurable by model: Windows® 7 Professional 64 preinstalled							
WLAN	One of the following, configurable by model (WiGig can coexist with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1, M.2 card									through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64 • Windows 10 Pro 64							
	 Intel Tri-Ba 							, M.2 card 302.11ac + BT4.1,	Limited warranty	y 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™					Wi-Fi + Blue												
							,		Mil-Spec test	MIL-STD-810G military testing							
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant							
Note: The specific	ations above r	may no	ot be ava	ilable in all	regions.					Lenovo							



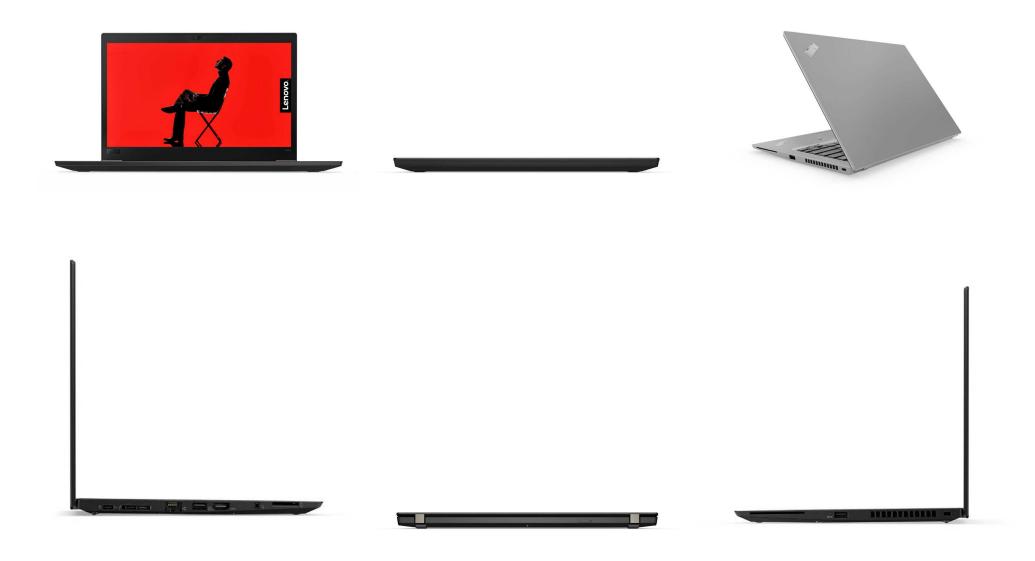
ThinkPad T470s Platform Specifications

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	Smart card reader Media reader	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 touch				
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 Power-on password, hard disk password, supervisor password, security ke Discrete TPM 2.0, TCG Certified vPro (optional) 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 45W slim tip AC adapter, 45W or 65W USB Type-C AC adapter **One of the following, configurable by model: **Windows® 7 Professional 64 preinstalled				
Storage	One of the following, co			•		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					
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				



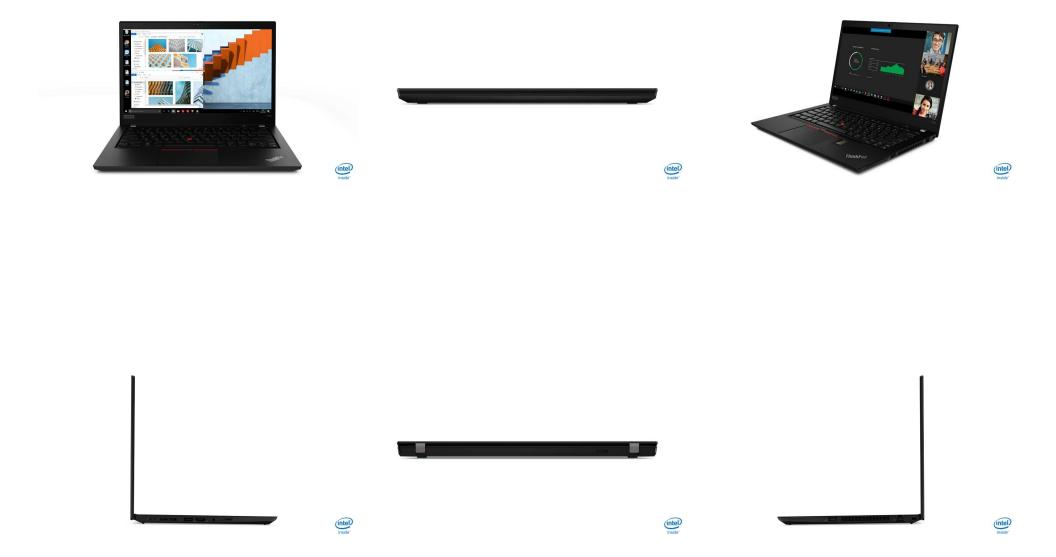
ThinkPad T480 Platform Specifications

Processor	7th Gener	ration I	ntel® Cor	e™ i5 Proc	essor				Dimensions	mensions WxDxH: 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm						n	
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Weight	Models			4Wh + 24Wh		2Wh, or 24Wh +		
	Number	Cores	Threads	Frequency	Frequency		Types	Graphics		Integrated N			/ 1.58 kg		3.92 lb / 1.78		
	i5-7200U	2	4	2.5 GHz	3.1 GHz	3MB	DDR4-2133	Intel HD Graphics		Integrated F			/ 1.65 kg		4.08 lb / 1.85		
	i5-7300U			2.6 GHz	3.5 GHz	3MB		620	_	Discrete Ma			/ 1.60 kg		3.97 lb / 1.80		
	or 8th Ge	neratio	n Intel Co	ore i3 / i5 / i	7 Process	or				Discrete PP	S	3.68 lb	/ 1.67 kg		4.12 lb / 1.87	kg	
	Processor Number i3-8130U	# of Cores	# of Threads	Base Frequency 2.2 GHz	Max Turbo Frequency 3.4 GHz	Cache 4MB	Memory Types	Processor Graphics	Case color Case material	Black Display cover: Magnesium Hybrid or PPS; Bottom: Glass-Fiber Reinforced Plastic							
	i5-8250U i5-8250U i5-8350U i7-8550U	4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	1.6 GHz3.4 GHz6MB1.7 GHz3.6 GHz6MB1.8 GHz4.0 GHz8MB DDR4-2400 Intel UHD Graphics 620 Forts Smart card read Media reader Ports												
Graphics	Intel HD (NVIDIA® ((discrete g supports supports supports s	Graphic GeForc graphic externa three ir	es 620 or ee® MX15 es is avai al digital r ndepende	Intel UHD 60, 2GB GD lable only o monitor via ent displays	Graphics 6 DR5 mem <i>n i7 model</i> HDMI or U ;	20 in p ory <i>s in EN</i> ISB Typ	e-Ć;		Monitor cable (optional)	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 media reader (MMC, SD, SDHC, SDXC), 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 USB-C to DP: Lenovo USB-C to DisplayPort Adapter					,		
Chipset Memory	Intel SoC 32GB ma	(Syste x / 240	m on Chi 0MHz DI	p) platform	hannel ca	oable, t	wo DDR4 S	O-DIMM sockets		nal) 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® ALC3287 codec /							
Display		220 nì	ts, 16:9 a	spect ratio	, 400:1 cor	itrast ra		•	Addio Support	stereo spe	akers, 2W	x 2, Dolby® e, headphor	Audio™ Pre		oo iack		
	Some:	250 ni 14.0" (3	ts, 16:9 a 355mm) \	spect ratio NQHD (25)	, 700:1 cor 60x1440),	ntrāst ra anti-gla	, LED backli itio, 170° vie re, LED bac	ewing angle cklight, IPS,	Keyboard UltraNav™	UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified							
Multi-touch (opt)		170° vi	ewing an				io, 72% gar	nut,	Security Security chip vPro (optional)								
Storage	System has	s one Hi IDD / S	DD slot or	one M.2 228 ab/s, 2.5" w	30 slot exclusion	sively for		ion System™	Fingerprint reader <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard be: anti-spoofing technology NFC <i>(optional)</i> Near Field Communication						ard bezel,		
	Some: N Some: 1:	1.2 SSE 28GB N	D / PCIe I M.2 SSD	NVMe, PCI / PCIe NVI	e 3.0 x 4 Me, PCIe 3	3.0 x 2,	-	,	Battery	ery Optional integrated Li-ion 24Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery							
Optane™ memory	* Installed I Intel Opta	M.2 SSL	D is PCIe :	3.0 x 4 but rū	n at PCIe 3.	0 x 2 du	sive with WV e to M.2 SSD	VAN adapter limitation	Max battery life (MobileMark® 2014)	mogratoun		nr 14.4 hr	21.8 hr	14.4 hr	24Wh + 48Wh 21.8 hr	29.0 hr	
Optical Ethernet	None Non-vPro vPro mod						icksonville) Jacksonville	<u> </u>	Discrete model 6.6 hr 13.2 hr 19.8 hr 13.6 hr 19.8 hr 26.4 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter								
WLAN +						,) h 4.1. M.2 card	Operating system	Optional: \	Windows® -	10 Home 64	1 or Windov	vs 10 Pro 6	64		
Bluetooth™							Vindows OS	ii 7. i, ivi. Z caiu	Limited warranty			figurable by i					
WWAN (optional)	One of the • Wireless • Integrate	following s WAN ed Mob	g, configu upgrada oile Broad	rable by mod	lel (mutually TE,	exclusiv	e with Intel O	ptane memory):		1-year de1-year de3-year/1-3-year/1-	epot repair epot with 2- yr battery o yr battery l	service -year planai depot repair imited onsit	r repair ser	vice			
	 Integrate 	ed Mob	oile Broad	dband 4G L	TÉ-A,	•	• • • • • • • • • • • • • • • • • • • •		Mil-Spec test MIL-STD-810G military testing								
SIM card (opt)	* For non-V	VWAN r	nodèl, it m	com L850-0 leans the mo lonal Verizor	del is NOT l	NWAN ι			Environment	ironment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant							



ThinkPad T480s Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions	WxDxH: 13.03" x 8.93" x 0.73"; 331mm x 226.8mm x 18.45mm
	Processor # of # of Base Max Turbo Cache Memory Processor Number Cores Threads Frequency Frequency Types Graphics	Weight Case color	Starting at 2.9 lb / 1.32 kg Black or Silver
	i5-7200U 2 4 2.5 GHz 3.1 GHz 3MB DDR4-2133 Intel HD Graphics 620 620	Case material	Display cover: CFRP Hybrid; Bottom: Magnesium
	or 8th Generation Intel Core i5 / i7 Processor	Smart card readei Media reader	r <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)
	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), 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 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 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2 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		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 (optional)	* 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 digitàl monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Camera Audio support	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		HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Display	* System clocks down for processors with lower memory controller Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
, ,	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	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, anti-spoofing technology
Multi-touch (opt)	On-cell touch, supports 10-finger gesture, 250 nits (FHD only)		Near Field Communication
Storage	One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s	Battery	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	Max battery life	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
\A/I ANI	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)		
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	Limited warranty	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 planar 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 LTE-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		Langua



ThinkPad T490 Platform Specifications

Processor	8th Gene	ration In	tel® Cor	e™ i5 / i7 F	Processor					Dimensions	WxDxH:	12.95" x 8.94	" x 0.70"; 329mr	m x 227mm x 17.9mm	
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Proces		Weight	Models	HD	FHD	FHD Low Power / WQHD	
	Number	Cores	Threads	Frequency	Frequency		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 i5-8365U	-		1.6 GHz 1.6 GHz		6MB 6MB		-4-111110	O	Case color Case material	Black	cover: PPS / 5	0% GE:		
	i7-8565U	4	8	1.8 GHz		8MB	DDR4-2400	ntei UHD (620	arapnics)	Case material				loy (with ISO 22196 con	npliant
	i7-8665U	1		1.9 GHz		8MB					Bottom:	anti-mio PA / 50°		atment for 20Q9 / 20QH	models only);
Graphics	Intel UHD NVIDIA® supports supports	Graphion GeForce external three incomes	cs 620 i e® MX25 digital i depende	nonitor via ent displays	or and DDR5 memo HDMI or Thi	underb	,	4Hz (HDN	ИI)	Smart card reade RFID reader Media reader Ports	rOptional RFID rea MicroSD Two USE one USE	: Smart card reader supporting lacard reader 3.1 Gen 1 (one 3.1 Type-C Ger	ader (NOT for 20C RFID / NFC (ONL) Always On), In 1 (with the functi	9 / 20QH models) Y for ALL 20Q9 / 20QH on of Power Delivery an 3 (with the function of PI	d DisplayPort),
Chipset				p) platform						1	HDMI 1.4	4b, Ethernet (RJ	-45), nano-SIM ca	ard slot (WWAN model),	- aa 2.
Memory	8GB or 16	6GB me	mory so	Idered to s	channel capa systemboard, but run at 2400	, one D			æt		headpho microSD * Dependi	ne / microphone card reader, sid ing on many factors	e combo jack, option le docking connect s, actual data transfe	onal smart card reader, tor, security keyhole er speed may be lower than	theoretical speed
Display						Acnor			Viewing	Monitor cable (optional)	HDMI to	VGA: Lenovo	HDMI to VGA Mo USB-C to VGA A	nitor Adapter	•
	Size Reso			ype Surfac		nalic		Gamut		(-,	USB-C to	o HDMI: Lenovo	USB-C to HDMI A	Adapter	
	14.0" HD (1366x768	B)	ΓN Anti-gla	re 220 nits 250 nits	16:9	400:1	45%	90°	Bundled Accy	USB-C to None	o DP: Lenovo	USB-C to Display	Port Adapter	
	14.0" FHD	(1920x1	080)* I	PS Anti-gla	(non touch)	10.9	700:1	45%	170°	Camera (optional) One of the • HD720	p camera with T	hinkShutter came	era privacy, fixed focus	
	14.0" FHD Low	(1920x1) Power	⁰⁸⁰⁾ I	PS Anti-gla	1	16:9	800:1	72%	170°	Audio support	HD Audio	o, Realtek® ALC		nkShutter camera privad	cy, fixed focus
	14.0" FHD Guai		080) vacy I	PS Anti-gla	re 400 nits	16:9	1000:1	72%	170°	Keyboard	dual arra	y far-field microp	phone, headphone	e / microphone combo ja optional LED backlight	ack
	14 O" WQI	HD (2560:	x1440) /ision™ I	PS Glossy	/ 500 nits	16:9	1500:1	100% Adobe	170°	UltraNav™	TrackPoi	nt® pointing devi	ce and buttonless	Mylar surface multi-toud	<u> </u>
Multi-touch (opt)				0-finger ge panels are	esture (FHD o available for 2	only) 0 <i>0</i> 9/ <i>2</i>	0QH models i			Security Security chip System Mgt <i>(opt)</i>	Discrete Intel vPro	TPM 2.0, TCG (o Technology	Certified	supervisor password, se	curity keynole
Storage	• M.2 228									Fingerprint reade	r Optional		atch on chip finger erprint reader on p		
				IVMe, PCI IVMe, PCI						NFC (optional)	NFC mo		port via RFID rea		
	 Intel Op 		Memory	H10 with S	Solid State S	torage	,			Battery Max battery life	Integrate	·	attery, supports R	apid Charge (charge up	to 80% in 1hr)
Optical	None										* Battery	life varies significa S5W USB Type-0	ntly with settings, us	age, & other factors	
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)									AC adapter Operating system			Home 64 or Windo	ows 10 Pro 64	
WLAN (optional) Bluetooth™ (opt)					02.11ac + Blue Wi-Fi + Blue			ter		Limited warranty	rranty One of the following, configurable by model: • 1-year depot repair service				
WWAN (optional)	One of the • Wireless				del:								ot repair service ted onsite service		
	 Integrate 	ed Mobi	le Broad	dband 4G I	TE, Fibocom	ո L830	-EB, M.2 ca	rd (EMEA	only)	Mil-Spec test	MIL-STD	0-810G military to	esting		
CIM cord (ant)	• Integrate * Only non- * For non-V	ed Mobi -WWAN a WWAN m	le Broad and WWA odel, it m	dband 4G I NN upgradab leans the mo	TE-A, Fiboco TE-A, Fiboco le are available odel is NOT W	om L86 e on 20 WAN up	60-GL, MIM Q9 / 20QH m ogradable	card O 4x4, M nodels	.2 card	Environment	EPEAT™	' Silver; ENERG`	Y STAR® 7.1; RoF	IS-compliant	
SIM card (opt)					n LTE (US) S	iivi car	u								Longy











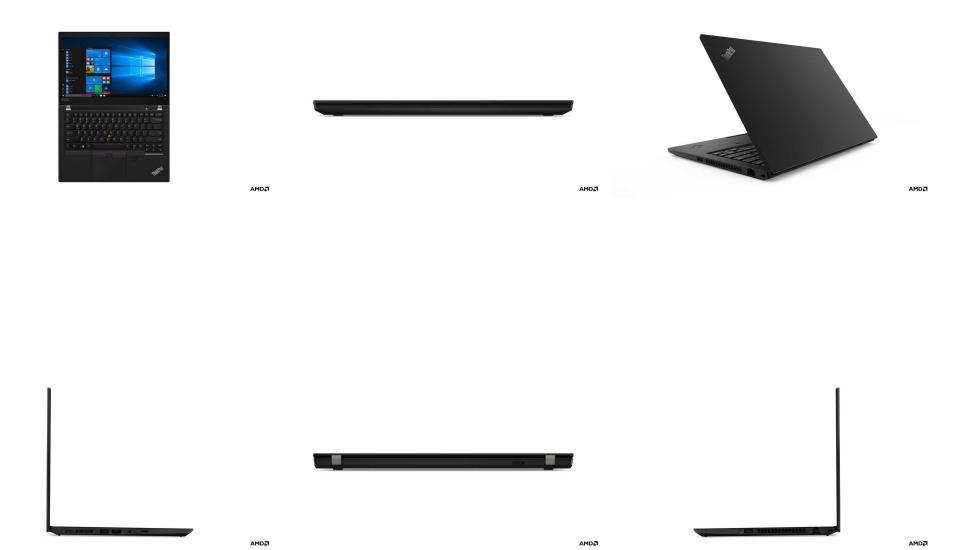






ThinkPad T490s Platform Specifications

Processor	8th Generation								Dimensions	WxDxH (black with FHD / F	Privacy Guard):	06 15mm v 16 7mm
	Processor # of Number Cores	# of Threads		Max Turbo Cac		emory vpes	Proce Graph			WxDxH (black with FHD Lo	3.90" x 0.66"; 329.0mm x 2 ow Power / WQHD):	
	i5-8265U	7 moddo		3.9 GHz 6N	_	уроо	Спарі	11100	1	MyDyU (12.94" x 8	3.89" x 0.63"; 328.8mm x 2 3.92" x 0.68"; 329.15mm x	25.8mm x 16.1mm
	i5-8365U 4	8	1.6 GHz	4.1 GHz 6N	1B DD	34-2400 Ir	ntel UHD	Graphics	Weight	,	1 ′ 1	Black with FHD Low Power	
	i7-8565U	"		4.6 GHz 8N	1B	14-2400	62			Models	Black with FHD	/ WQHD / Privacy Guard	Silver
	i7-8665U		1.9 GHz	4.8 GHz 8N	1B				_	Weight	2.98 lb / 1.35 kg	2.81 lb / 1.27 kg	3.29 lb / 1.49 kg
Graphics	Intel UHD Graph supports externa supports three in Max resolution:	al digital	monitor via Á ent displavs:				Hz (HDN	MI)	Case color Case material	Bottom:			er);
Chipset Memory	Intel SoC (Syste 8GB, 16GB or 3 * Installed memory	em on Ch	ip) platform 00MHz DDB	4 / soldered t	o systei	mboard, r	no socke		Media reader Ports	MicroSD Two USB one USB	card reader 3.1 Gen 1 (one A 3.1 Type-C Gen 1	lways On), (with the function of Power	Delivery and DisplayPort)
Display	Size Resolution	-	Type Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		HDMI 1.4	b, Ethernet extens	Thunderbolt 3 (with the fusion connector, nano-SIM cannob jack, optional smart cannob	ard slot (WWAN models),
	14.0" FHD (1920x		IPS Anti-glare	250 nits (non-touch) 300 nits (multi-touch)	16:9	700:1	45%	170°	Monitor cable	microSD * Dependir HDMI to	card reader, side on Signon many factors, a SVGA: Lenovo H	docking connector, security actual data transfer speed may b DMI to VGA Monitor Adapte	keyhole be lower than theoretical spee
	14.0" FHD (1920x Low Power	(1080)	IPS Anti-glare	400 nits	16:9	800:1	72%	170°	(optional) Bundled Accy	USB-C to	DP: Lenovo U	SB-C to VGA Adapter SB-C to DisplayPort Adapte et Extension Adapter Gen 2	
	14.0" FHD (1920x ThinkPad Pi Guard		IPS Anti-glare	400 nits	16:9	1000:1	72%	170°	Camera	One of the	following, configural	<u>'</u>	
	14.0" WQHD (256 HDR, Dolby		IPS Glossy	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	IR came HD Audio	era and HD720p c , Realtek® ALC32	amera with ThinkShutter ca	mera privacy, fixed focus
Multi-touch (opt)	On-cell touch, s	upports 1	0-finger gest	ure (FHD onl	y)							one, headphone / microphor	ne combo jack
Storage	M.2 2280 SSIM.2 2280 SSIM.2 2242 SSI) / PCle I	NVMe, PCIe						Keyboard UltraNav™	6-row, spi	ill-resistant, multin it®pointing device	nedia Fn keys, optional LED and buttonless Mylar surfac	backlight e multi-touch touchpad
	 Intel Optane™ M.2 2280, PC 	Memory	H10 with So		age,				Security Security chip	Discrete 7	ΓΡΜ 2.0, TCG Cei	lisk password, supervisor pa rtified	assword, security keyhole
Optical	None								System Mgt (opt)	Intel vPro r <i>Ontional</i> :	Touch style mate	h on chip fingerprint reader	on the nalm rest
Ethernet	Native Intel Ethe								NFC (optional)	Near Fiel	d Communication	ir on one imgerprint reader	on the paint rest
WLAN +	One of the following				л лаар	nor don z	_		Battery	Integrated	Li-ion 57Wh batt	ery, supports Rapid Charge	(charge up to 80% in 1hr
Bluetooth™	 Intel Wireless- 	AC 9560	Wi-Fi 2x2 80)2.11ac + Blu		5.0			Max battery life		ark® 2014: 20 hr ife varies significantl	y with settings, usage, & other fa	actors
(optional)	Intel Wi-Fi 6 A	,			oth 5.0				AC adapter	45W or 6	5W USB Type-C A	C adapter	
WWAN (optional)	 One of the followir Wireless WAN 	ng, configu	rable by mode	!:					Operating system	Optional:	Windows® 10 Ho	me 64 or Windows 10 Pro 6	4
SIM card (opt)	 Integrated Mol Integrated Mol * For non-WWAN Nano-SIM card 	bile Broa bile Broa <i>model, it n</i>	dband 4G LT dband 4G LT neans the mod	E-A, Fibocom	L850-0 N upgra	ŚL, M.2 c	d (EMEA ard	A only)	Limited warranty	 1-year o 3-year/ 	following, configural depot repair servic 1-yr battery depot 1-yr battery limited	e repair service	
,	2	,		(,					Mil-Spec test	MIL-STD-	-810G military test	ting	
									Environment	EDE ATT	O =1.1==0.17	STAR® 7.1; RoHS-compliant	



ThinkPad T495 Platform Specifications

Processor	AMD Ryzer	ı™ PR0	O Mobile	Processo	rs with Ra	deon™ Ve	ga Graphics			Dimensions	WxDxH:	12.95" x 8.94"	x 0.70"; 329mm;	x 227mm x 17.9mm
		# of	# of		Max Turbo	Cache	Memory	Proce		Weight	Models	HD	FHD	FHD Low Power
	Number C Ryzen 3			Frequency		2MB L2 /	Controller	Grap Radeon		Case color	Weight Black	3.46 lb / 1.57 kg	3.46 lb / 1.57 kg	3.39 lb / 1.54 kg
	Pro 3300U	4	4	2.1 GHz	3.5 GHz	4MB L3		Grap		Case material		ver: PPS / 50%	GF;	
	Ryzen 5 Pro 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Grap			Bottom:	PA / 50% C	***	
	Ryzen 7 Pro 3700U	4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeon Grap	Vega 10	Smart card reade Media reader Ports	MicroSD ca One USB 3	ard reader 3.1 Gen 1 (Alwa	ys On), one USB 3	3.1 Gen 2,
Graphics	AMD Raded supports ex supports for Max resolut	ternal ur inde	Í digital r epender	nonitor viant displays	USB-C or	HDMI;	orocessor; 60@60Hz (H	HDMI)			HDMI 2.0, I headphone microSD ca	Ethernet (RJ-45 / microphone o ard reader, side	5), nano-SIM card s combo jack, optiona docking connector	of Power Delivery and DisplayPort), slot (WWAN models), al smart card reader, r, security keyhole speed may be lower than theoretical speed
Chipset Memory	AMD SoC (32GB max / 8GB or 16G * Installed me	/ 2400 3B me	MHz DI mory sc	DR4, dual- oldered to :	channel ca systemboa	d, one D	DR4 SO-DII	MM sock	ĸet	Monitor cable (optional) Bundled Accy	HDMI to VC USB-C to V USB-C to I None	GA: Lenovo F /GA: Lenovo U DP: Lenovo U	IDMI to VGA Monit JSB-C to VGA Ada JSB-C to DisplayPo	or Adapter pter
Display	Size Resolu	ition	T	ype Surfac	e Brightne	ss Aspec	ct Contrast Ratio		Viewing Angle	Camera (optional	() One of the fo • HD720p	ollowing, configura camera with Thi	able by model: inkShutter camera	privacy, fixed focus
	14.0" HD (13	366x76	8)	TN Anti-gla	re 220 nit	s 16:9	400:1	45%	90°	Audio oumnort	 IR camera 	a and HD720p	camera with Thinks	Shutter camera privacy, fixed focus
	14.0" FHD (1	1920x1	080)	PS Anti-gla	re 250 nit (non-tou 300 nit (multi-tou	ch) 16:9	700:1	45%	170°	Audio support	stereo spea dual array f	ar-field microph	Dolby® Audio™ Pre none, headphone /	microphone combo jack
	14.0" FHD (1 Low Po	1920x1	080)	PS Anti-gla		1	800:1	72%	170°	- Keyboard UltraNav™				tional LED backlight ylar surface multi-touch touchpad
Multi-touch (opt)			pports 1	0-finger ge	esture (FHI) only)			L	Security	Power-on p	assword, hard	disk password, sur	pervisor password, security keyhole
	• M.2 2280				()	- ···· y /				Security chip System Mgt	DISCRETE 11 DASH Man	PM 2.0, TCG Ce agement	ertified	
· ·	M.2 2280M.2 2242												ch on chip fingerpr	int reader on the palm rest
-	None	TI 044	10: 1							Battery				oid Charge (charge up to 80% in 1hr)
	Realtek® R1						- 5.0			Max battery life	MobileMari * Battery life	k® 2014: 13.4 l varies significant	nr tly with settings, usag	e. & other factors
WLAN Bluetooth™	Intel Wireles Bluetooth 5						ombo adapt	ter		AC adapter	45W or 65V	N USB Type-C	AC adapter	
	One of the fo				del:								Windows 10 Pro 6	4
	 Wireless V Integrated * For non-WV 	Mobi	ile Broad	dband 4G	LTE-A, Fibo	ocom L8! WWAN ut	50-GL, M.2 o	ard		Limited warranty	 1-vear de 	ollowing, configura epot repair servi yr battery depot	ce	
SIM card (opt)	Nano-SIM o									Mil-Spec test		10G military tes		
										Environment			STAR® 7.1; RoHS-	-compliant

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

Lenovo July 2019





AMD.

AMD.



ThinkPad T495s Platform Specifications

Processor	AMD Ryz	en™ PF	RO Mobi	le Pr	ocessors	s with Rad	eon™ Ve	ga Graphics	3		Dimensions	WxDxH (I	FHD / Privacy Gua		
	Processor		# of			/lax Turbo	Cache	Memory	Proce			WyDyH (12.95" x 8 Low Power):	3.90" x 0.66"; 329.0mm	x 226.15mm x 16.7mm
	Number Ryzen 5		Threads		`	requency	MB L2 /	Controller	Grap Radeon			VVADAII (L		3.89" x 0.63"; 328.8mm	x 225.8mm x 16.1mm
	Pro 3500U	4	8	2.1	GHz		4MB L3	DDR4-2400	Grap		Weight	Models	FHD	FHD Low Power	FHD Privacy Guard
	Ryzen 7	4	8	2.3	GHz -		MB L2 /	DDR4-2400	Radeon \	Vega 10]	Weight	2.92 lb / 1.33 kg	2.76 lb / 1.25 kg	2.89 lb / 1.31 kg
	Pro 3700U						4MB L3		Grap	hics	Case color Case material	Black	over: CFRP Hvbr	id:	
Graphics	AMD Rad supports of supports of	externa	al digital	mon	itor via Ċ			,			Smart card reade	Bottom:	Magnesium	/Aluminum	
						JSB-C); 4	096x216	60@24Hz (l	HDMI)		Media reader	MicroSD (card reader		_
Chipset	AMD SoC							`	,		Ports	One USB	3.1 Gen 1 (Alway	s On), one USB 3.1 Gen	2, er Delivery and DisplayPor
Memory								ard, no socl e to AMD lim				HDMI 2.0 headphor	, Ethernet extensi ne / microphone co	on connector, nano-SIM on connector, nano-SIM	card slot (WWAN models), t card reader,
Display	Size Reso	olution		Туре	Surface		Aspec Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable	* Dependin	ng on many factors, a	docking connector, securi actual data transfer speed ma DMI to VGA Monitor Adar	ay be lower than theoretical spe
	14.0" FHD	(1920x	1080)	IPS	Anti-glare	250 nits (non-touch 300 nits (multi-touch	/ 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 Ger	
	14.0" FHD Low	(1920x Power	1080)	IPS .	Anti-glare	,	1	800:1	72%	170°	Camera	• HD720p		nkShutter camera privacy	, fixed focus camera privacy, fixed focus
	FHD 14.0" Think Guar			IPS .	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	, Realtek® ALC32 eakers, 1W x 2, D		, .
Multi-touch (opt)	On-cell to	uch, sı	upports	10-fir	nger ges	ture (FHD	only)				Kevboard		· ·	nedia Fn keys, optional L	· · · · · · · · · · · · · · · · · · ·
Storage Optical	M.2 2280 None	SSD /	PCIe N	VMe,	, PCIe 3.	.0 x 4					UltraNav™ Security	TrackPoin	t® pointing device	and buttonless Mylar sur	face multi-touch touchpad password, security keyhole
Ethernet	Native Interviewed	el Ethe	rnet Co	nnec	tion I219	9-V (Non-v	<i>Pro</i>) or I	219-LM (<i>vF</i> lapter Gen	Pro)		Security Chip System Mgt	Discrete 7	гразsword, паго о ГРМ 2.0, TCG Cer anagement		password, security keyriole
WLAN (optional)	Intel Wirel							•			Fingerprint reade	r Optional:	Touch style matc	h on chip fingerprint read	er on the palm rest
Bluetooth™								ombo adapi	ter		NFČ	None	<u> </u>		•
WWAN (optional)	 Wireless 	s WAN	upgrad	able	•						Battery Max battery life	MobileMa	ark® 2014: 16.4 h		ge (charge up to 80% in 1h
	 Integrate * For non-V 	ed Mot	oile Broa	adbar mean	nd 4G LT	E-A, Fibo	com L85	0-GL, M.2 o	ard		AC adapter	45W or 6	5W USB Type-C A	AC adapter	n lactore
SIM card (opt)	Nano-SIM										Operating system	Optional:	Windows® 10 Ho	me 64 or Windows 10 Pro	64
											Limited warranty	• 1-year o	following, configural depot repair service I-yr battery depot	e	
											Mil-Spec test		810G military tes	· ·	
											Environment	EPEAT™	Silver: ENERGY S	STAR® 7.1; RoHS-complia	ant









ThinkPad T580 Platform Specifications

Processor	7th Generation Intel® C	Core™ i5 Processor			Dimensions	<i>WxDxH:</i> 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor # of # of		Memory	Processor	Weight	Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg
	i5-7200LL	ds Frequency Frequency Cache 2.5 GHz 3.1 GHz 3MB	Types	Graphics Intel HD Graphics	Case color Case material	Black Display cover: Glass-Fiber Reinforced Plastic (PPS);
	i5-7300U 2 4	2.6 GHz 3.5 GHz 3MB	DDR4-2133	620	Case material	Bottom: Glass-Fiber Reinforced Plastic (PPS);
	or 8th Generation Intel		1	1 -		er Optional: Smart card reader
	Processor # of # of Number Cores Thread	Base Max Turbo Cache	Memory Types	Processor Graphics	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.1 Gen 1 (one Always On),
	i5-8250U	1.6 GHz 3.4 GHz 6MB		·		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).
	i5-8350U 4 8	1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB	DDR4-2400	Intel UHD Graphics 620		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	i7-8650U	1.9 GHz 4.2 GHz 8MB	-	020		headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole
Graphics		or Intel UHD Graphics 620 in p			Manitan aabla	* Depending on many factors, actual data transfer speed may be lower than theoretical speed
		or Intel UHD Graphics 620 in p 150, 2GB GDDR5 memory;	rocessor an	nd	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	supports external digital	al monitor via HDMI or USB Tyr	oe-C;		Camera (optional	I) One of the following, configurable by model:
	supports three independent Max resolution: 4096x2	ident displays; 2304@60Hz (USB Type-C); 40)96x2160@	30Hz (HDMI)		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Chipset	Intel SoC (System on C	Chip) platform			Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
Memory	32GB max / 2400MHz * System clocks down for p	DDR4, dual-channel capable, to processors with lower memory contributes.	two DDR4 S troller	O-DIMM sockets		dual array microphone, headphone / microphone combo jack
Display		FHD (1920x1080), anti-glare, laspect ratio, 700:1 contrast ratio			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" (396mm)	UHD (3840x2160), anti-glare, io, 1000:1 contrast ratio, 72% g	LED backlig	ht, IPS, 300 nits,	Security	Power-on password, hard disk password, supervisor password, security keyhole
Multi-touch (opt)		s 10-finger gesture (FHD only)	jamut, 170	viewing angle	Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology
Storage		or one M.2 2280 slot exclusively fo		ion CustomIM	Fingerprint reade	er Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
	Some: SSD / SATA 6.0	0Gb/s, 2.5" wide, 7mm high, A 0Gb/s, 2.5" wide, 7mm high (e.	g. xxxGB S	SD)	NFC (optional)	Near Field Communication
		e NVMe, PCIe 3.0 x 2, 16Gb/s SD / PCIe NVMe, PCIe 3.0 x 2,			Battery	Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery
0 1 711	in WWAN slot a	as 2nd Storage, mutually exclu	sive with W\	WAN	Max battery life	Models 24Wh 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh
Optane™ memory Optical	y Optional: Intel Optane None	memory, PCIe NVMe, PCIe 3.	0 x 2		(MobileMark® 2014)	Max battery life 5.8 hr 12.5 hr 18.1 hr 13.8 hr 20.3 hr 26.1 hr
Ethernet		Ethernet Connection I219-V (Ja Ethernet Connection I219-LM (.)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WLAN +		ss-AC 8265. Wi-Fi 2x2 802.11a		,	I	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™	* Intel 8265ac card suppor	rts BT4.2 but is limited to BT4.1 by			Limited warranty	One of the following, configurable by model: • 1-vear depot repair service
WWAN (optional)	One of the following, config • Integrated Mobile Bro	gurable by model: padband 4G LTF				3-year/1-yr battery depot repair service
	Inteľ XMM™ 7262 (Fil	bocom L830-EB), M.2 card (EM	IEA only)		Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing
	 Integrated Mobile Bro Intel XMM™ 7360 (Fit 	bocom L850-GL), M.2 card			Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
SIM card (opt)	* For non-WWAN model, it	t means the model is NOT WWAN obtional Verizon LTE (US) SIM ca				
	ations above may not be a		A1 W		l .	Lenow





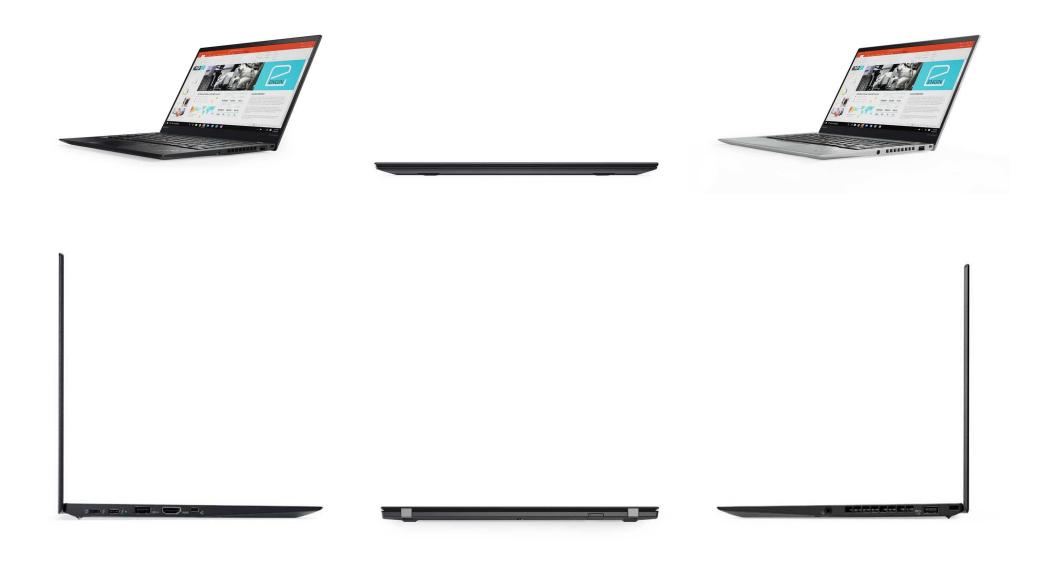


ThinkPad T590 Platform Specifications

Processor	8th G	enerati	on In	ntel® Co	re™ i5	5 / i7 Pro	ocessor						Dimensions	<i>WxDxH</i> : 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
	Proce Numb		of ores	# of Threads		ase Nuency F	Max Turbo requency	Cache	Memory Types		rocess Graphic		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;
	i5-826 i5-836 i7-856 i7-866	5U 5U	4	8	1.6 1.8	GHz GHz	4.1 GHz 4.6 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel U	JHD Gi 620	raphics	Smart card reader Media reader Ports	Bottom: PA / 50% GF Optional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On).
·	Intel U NVID suppo suppo	JHD Gr A® Gel orts extents	raphi Force ernal ee in	l digital i depende	in pro 50, 20 monit ent di	cessor a GB GDD or via H splays;		inderb		24Hz ((HDMI	1)	Monitor cable	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
Memory	48GB	max / or 16Gl	2400 B me	emory so	DŔ4, oldere	dual-ched to sys	annel capa stemboard, t run at 2400	one D				t	(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter (NOT available in EMEA) USB-C to DP: Lenovo USB-C to DisplayPort Adapter (NOT available in EMEA) None
Display	Size	Resoluti	ion	1	Гуре	Surface	Brightness	Aspec Ratio	t Contras Ratio		olor V imut /	iewing 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
		FHD (19		,		Anti-glare	-	16:9	700:1		00/	170°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Multi-touch (opt)		UHD (38 HDR, D ell touch				Anti-glare ger gest	ure (FHD c	16:9 only)	1200:1	Add	obe	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
	M.2M.2Inte M.2	2280 S 2242 S I Optar	SSD SSD ne™ I	/ SATA (/ PCle I / PCle I Memory e NVMe	NVMe NVMe H10	e, PCle 3 e, PCle 3 with So		orage	,				System Mgt (opt) Fingerprint reader	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 Near Field Communication
Optical Ethernet		Pro model:					ection I219 ection I219			e)			Battery Max battery life	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics)
WLAN (optional) Bluetooth™							.11ac + Blu /i-Fi + Blue			pter			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WWAN (optional)	One o	the follo	owing	g, configu	ırable l	by model	<u>:</u>			•				Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	InteInte* For r	grated grated on-WW	Mobi Mobi	ile Broad Brodel, it n	dband dband neans	d 4G LT the mode	E, Fibocom E-A, Fiboco el is NOT WI LTE (US) S	om L8! <i>NAN up</i>	50-GL, M.2 ogradable		MEA (only)		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-STD-810G military testing
				•			` ,							EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo August 2019



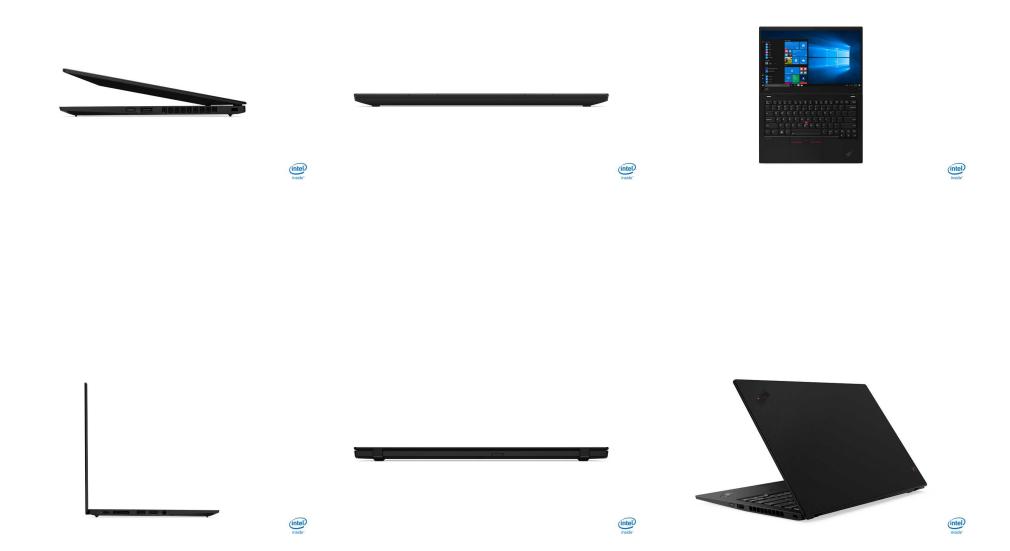
ThinkPad X1 Carbon (5th Gen) Platform Specifications

Processor	6th Generation	Intel® Co	re™ i5 / i7	Processor ((EMEA I	has only i5-630	0U and i7-6600U)	Smart card reade					
		# of Threads	Base Frequency	Frequency		Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader, supports UHS-II microSD card Two USB 3.1 Gen 1 (USB 3.0, one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery				
	i5-6200U i5-6300U i7-6500U i7-6600U	4	2.3 GHz 2.4 GHz 2.5 GHz 2.6 GHz	3.0 GHz 3.1 GHz 3.4 GHz	3MB 3MB 4MB	LPDDR3-1866	Intel HD Graphics 520	WiGig dock (opt) Monitor cable (optional)	and DisplayPort), HDMI 1.4b, Ethernet extension connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed				
	or 7th Generation							Optionaly	USB-C to DP: Lenovo USB-C to DisplayPort Adapter				
	$\overline{}$	# of Threads		Frequency		Memory Types	Processor Graphics	Bundled Accy Camera (optional	Optional: ThinkPad Ethernet Extension Cable 1) 720p: HD720p resolution, fixed focus				
	i5-7200U i5-7300U i7-7500U 2	4	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.1 GHz 3.5 GHz 3.5 GHz 3.9 GHz	3MB 3MB 4MB	LPDDR3-1866	Intel HD Graphics 620	Audio support	IR & 720p: IR camera and HD720p camera HD Audio, Conexant® CX11871 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack				
	i7-7600U				4IVID			Keyboard UltraNav™ Security 6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch Power-on password, hard disk password, supervisor password, secu					
Graphics	Intel HD Graphic supports externa supports three in Max resolution:	al digital ndepend 4096x23	monitor via ent display 804@60Hz	a HDMI or U rs; : (USB Type	,	,	4Hz (HDMI)	Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology				
Chipset Memory	Intel SoC (Syste 8GB or 16GB /	em on Ch 1866MHz	ip) platforr z LPDDR3	n / soldered t	to syste	emboard, no s	sockets	NFČ (optional)	er Touch style match on chip fingerprint reader on the palm rest Near Field Communication				
Display	Some: 14.0" (3	s, 16:9 as 355mm) V	pect ratio, VQHD (25	700:1 contr 60x1440), a	rast rati anti-gla	io, 170° viewii	ng angle ight, IPS,	Battery Max battery life AC adapter	Integrated Li-Polymer 3-cell (57Wh) RapidCharge battery MobileMark® 2014: 15.5 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter				
Multi-touch	None	s, 10.5 as	peci ralio,	700.1 00111	iasi iai	10, 170 VICWII	ig arigic	RapidCharge	AC adapter 45W USB-C 65W USB-C				
Storage	One of the followin • M.2 SSD / SA	TA 6.0Gb	/s (e.g. xx)	kGB SSD M	1.2)		LO DOL- NIVAL-)		Charge to 80%Not support1.0 hrCharge to 100%Not support2.5 hr				
Optical	M.2 SSD / PC None	ie ivvivie	, PCIe 3.0	x 4, 32Gb/s	s (e.g.)	XXXGB SSD IV	1.2 PCIe NVMe)	Operating system	n One of the following, configurable by model: • Windows® 7 Professional 64 preinstalled				
Ethernet	Native Intel Ethe						Pro)	-	through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64				
WLAN	One of the followin Intel Dual Ban Intel Dual Ban Intel Tri-Band M.2 card	d Wireles d Wireles	s-AC 8260 s-AC 8265), Wi-Fi 2x2 5, Wi-Fi 2x2	802.1	1ac + BT4.1, l 1ac + BT4.1, l	M.2 card M.2 card	Limited warranty	 Windows 10 Pro 64 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™	Bluetooth 4.1 wi	ireless, ir	tegrated in	Ni-Fi + Bl	uetooth	combo adap	ter	Mil-Spec test	MIL-STD-810G military testing				
WWAN (optional)	Integrated Mobil (Sierra Wireless	le Broadk EM7455	pand 4G L	ΓΕ-A, Qualo	comm®	Snapdragon ¹	™ X7 LTE-A	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
SIM card (opt)	Micro-SIM card			, ,		,		_					
Dimensions Weight Case color Case material	WxDxH: 12.7 Starting at 2.49 Black or Silver (Display cover: Bottom:	lb / 1.13 silver is N CFRP/G	kg NOT availa	ble in EME <i>i</i> d;		1mm x 15.95r	mm 						
									Lenove				



ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Gener	ration Ir	ntel® Co	re™ i5 Pro	cessor				Dimensions	<i>WxDxH</i> : 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 2.49 lb / 1.13 kg Black or Silver (silver case is NOT available in EMEA)
	i5-7300U	2	4	2.6 GHz	3.5 GHz	змв	LPDDR3-1866	Intel HD Graphics 620		Display cover: CFRP/GFRP hybrid; Bottom: magnesium alloy / PPS hybrid
	or 8th Ger	neratio	n Intel C	ore i5 / i7	Processor				Smart card reade Media reader	rNone MicroSD card reader, supports UHS-II
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency		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,
	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	LPDDR3-2133	Intel UHD Graphics 620	Monitor cable	Ethernet extension connector, nano-SIM card slot (WWAN models), 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 speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Graphics	Intel HD G	Graphic externa	s 620 or Il digital	Intel UHE	Graphics a HDMI or	620 in USB T	processor; vpe-C;		(optional) Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
	supports t	three in	idepend	ent display	/s;		4096x2160@3	30Hz (HDMI)	, , ,) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	* System ci	SGB / 2 locks do	133MHz	LÉPDDR3	/ soldered	to sys	temboard, no	sockets	Audio support	 IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby® Atmos™ via headphones
Display	300 nits	55mm) . 16:9 a	FHD (1	920x1080 tio. 700:1), anti-glare contrast ra	tio. 72	backlight, IPS % gamut, 170	o viewing angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad
Multi-touch (opt)	• 14.0" (39 300 nits • 14.0" (39 LED back 170° vie	55mm) , 16:9 a 55mm) cklight, wing a	WQHD aspect ra HDR W IPS, 500 ngle	(2560x14- itio, 700:1 QHD (256) nits,16:9	40), anti-gl contrast ra 30x1440) w	are, LE itio, 72 ith Dol io, 150	ED backlight, II % gamut, 170 by Vision™, gl 0:1 contrast ra	PS, ° viewing angle ossy,	vPro <i>(optional)</i> Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Storage	One of the					D Offig)			Near Field Communication Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
-	M.2 SSIM.2 SSI	D / SAT	A 6.0Gb	/s (e.a. xx	xGB SSD I	И.2) /s (e.g.	.xxxGB SSD N	M.2 PCIe NVMe)	1	with 65W USB Type-C AC adapter MobileMark® 2014: 19.3 hr
Optane™ memory Optical	None None								AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W Low Halogen USB Type-C AC adapter
Ethernet							or I219-LM (v		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN +							n Adapter Gen	n 4.1, M.2 card		One of the following, configurable by model: 1-year depot repair service
Bluetooth™							y Windows OS	14.1, W.2 Caru		3-year/1-yr battery depot repair service
WWAN (optional)	Integrated	Mobile	e Broadl	and 4G L	TE-A,					3-year/1-yr battery limited onsite service
SIM card (opt)	* For non-V	VWAN n	nodel, it n	neans the n	GL), M.2 ca nodel is NOT on LTE (US	`WWAI	V upgradable		Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Civi dara (opt)	Tallo Ollv	i cara s	noi, opin	Jilai VOIIZ),, LIL (UC	, Cilvi	ouru			Langua



ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th Generation Intel® Co	ore™	i5 / i7 Pro	ocessor					Dimensions	WxDxH: 12.74" x 8.55" x 0.59"; 323.5mm x 217.1mm x 14.9mm
	Processor # of # of Number Cores Thread	s Fre	equency F	requency		lemory Types		essor phics	Weight Case color Case material	Starting at 2.4 lb / 1.09 kg Black paint or black weave Display cover: Carbon Fiber;
	i5-8265U i5-8365U i7-8565U i7-8665U	1	.6 GHz .8 GHz .4	4.1 GHz 6 4.6 GHz 8	MB MB MB	PDDR3-2133		UHD iics 620	Smart card reade Media reader	None
Graphics	Intel UHD Graphics 620 supports external digita supports three independent Max resolution: 4096x2	in p moi dent 304	rocessor; nitor via H displays; @60Hz (T	DMI or USE	3 Type			MI)	Ports Monitor cable	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 Optional: Lenovo HDMI to VGA Monitor Adapter
Chipset Memory	Intel SoC (System on C 8GB or 16GB / 2133MF	hip) Iz LF	platform PDDR3 / s	oldered to s	system	board, no s	ockets		Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2 One of the following, configurable by model:
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	- Camera (<i>optional</i> ,	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0" FHD (1920x1080) Multi-touch	IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	Audio support	HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / 4 array far-field microphones, headphone / microphone combo jack
	14.0" FHD (1920x1080) Low Power	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight
	FHD (1920x1080) 14.0" ThinkPad Privacy Guard	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
	14.0" WQHD (2560x1440)	IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	Security chip	Discrete TPM 2.0, TCG Certified Intel vPro Technology
	UHD (3840x2160) HDR 400, Dolby Vision™	IPS	Glossy	500 nits	16:9	1400:1	90%	170°		r Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Multi-touch (opt)	Capacitive-type multi-to anti-reflection (AR), anti	uch, -smı	supports udge coati	10-finger ge	esture	(FHD only),			Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Storage	One of the following, config • M.2 2280 SSD / SATA	6.0	Gb/s						Max battery life AC adapter	MobileMark® 2014: 18.3 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	 M.2 2280 SSD / PCIe Intel Optane™ Memor 				rane				Operating system	· · · · · · · · · · · · · · · · · · ·
Optical	M.2 2280, PCIe NVMe Intel Optane SSD, M.2 None	á 3.0	x 4		0 /				Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
Ethernet	Native Intel Ethernet Co	nne	ction I219-	-V (Non-vPi	ro) or I	219-LM (<i>vP</i>	Pro)		Mil-Spec test	MIL-STD-810G military testing
	via bundled or optional						2		Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
WLAN Bluetooth™	Intel Wireless-AC 9560, Bluetooth 5.0 wireless,						er			
WWAN (optional) SIM card (opt)	One of the following, config • Integrated Mobile Bro • Integrated Mobile Bro * For non-WWAN model, it Nano-SIM card slot, opt	adba adba <i>meai</i>	and 4G LTI and 4G LTI ans the mode	E-A, Fiboco E-A, Fiboco el is NOT WW	m L86 VAN up	0-GL, MIMC gradable		1.2 card		
Note: The specifica	ations above may not be a	/ailat	ble in all re	aions.						Lenovo









ThinkPad X1 Extreme Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Smart card reader Optional: Smart card reader
	Processor # of # of Base Max Turbo Cache Threads Frequency Frequency Cache Types Graphics	Media reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On),
	15-8300H	two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader,
	12 2.2 GHz 4.1 GHz 9MB 12 12 2.6 GHz 4.3 GHz 4.3 GHz 12 12 12 13 GHz 14 GHz 15 GH	SD card reader, security keyhole * Power Delivery only supports power-out for charging peripherals
Graphics	Intel UHD Graphics 630 in processor and NVIDIA® GeForce® GTX 1050 Ti, 4GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt™; supports four independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (HDMI)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Monitor cable (optional)
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, dual-channel capable, two DDR4 SO-DIMM socket	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio,	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
	72% gamut, 170 ⁶ viewing angle Some: 15.6" (396mm) HDR 4K (3840x2160) with Dolby Vision™, anti-glare,	Keyboard 6-row, spill-resistant, multimedia Fn keys, LED backlight UltraNav™ TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
Multi-touch (opt) Pen	LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1200:1 contrast ratio, 100% gamut, 170° viewing angle, multi-touch, anti-reflection (AR) Capacitive-type multi-touch, supports 10-finger gesture (4K only) Supports pen accessory, please see the accessory compatibility for details	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the keyboard bezel
Storage	 Up to 2 drives (two M.2 SSD) M.2 SSD / SATA 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 	Color calibration None NFC None
Optane™ memory RAID <i>(optional)</i> Optical		Battery Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Max battery life (MobileMark 2014) AC adapter Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Hybrid mode: 14.9 hr * Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro)) via bundled or optional ThinkPad Ethernet Extension Cable	Operating system Windows® 10 Home 64 or Windows 10 Pro 64
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	Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN SIM card	None None	• 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing
Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm WxDxH (multi-ouch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm	Environment EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant
Weight	Non-touch model: starting at 3.76 lb / 1.7 kg; Multi-touch model: starting at 4.06 lb / 1.8 kg	
Case color Case material	Black Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy	
Nata. The enesities	ations above may not be available in all regions	Lenow



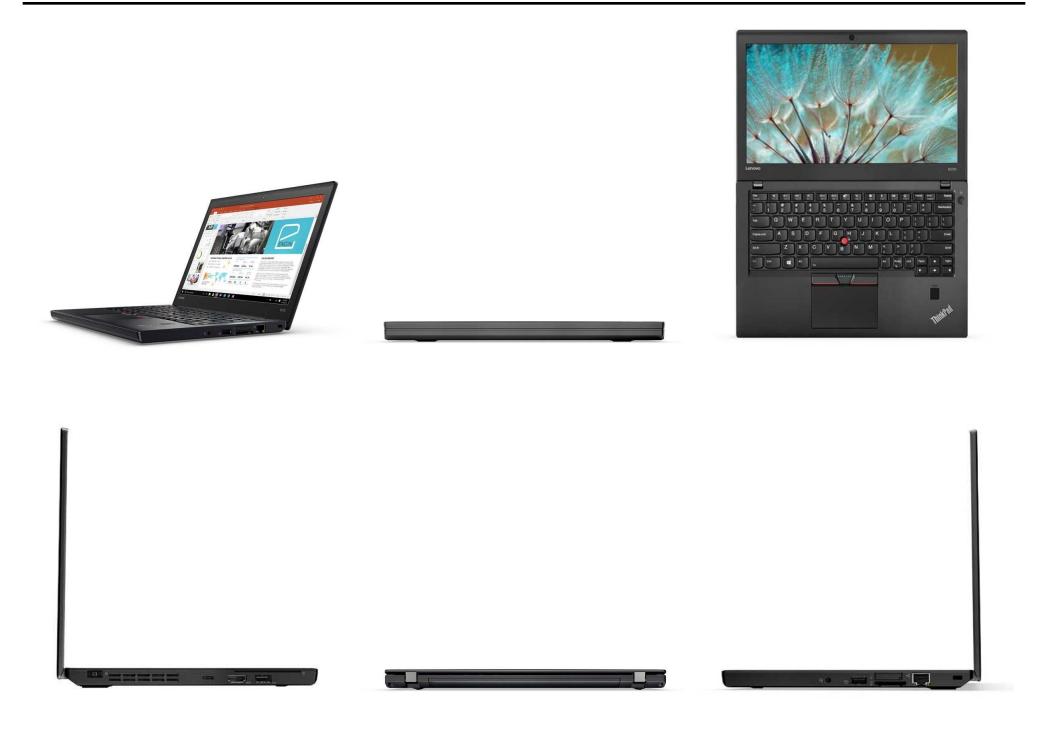






ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th Generation	Intel® Co	re™ i5 /	i7 / i9 Pro	cessor					Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Processor # of Number Cores		Bas Freque	ency Freq	Turbo uency Cache	Mem Typ		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
	i5-9300H 4 i5-9400H 4 i7-9750H 6	8 8 12	2.4 G 2.5 G 2.6 G	iHz 4.3		DDR4	-2666 Ir	ntel UHD (630		Case color Case material	Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy
	i7-9850H 6 i9-9880H 8	12 16	2.6 G	_	GHz 12ME GHz 16ME	_				Media reader	er Optional: Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card
Graphics	Intel UHD Graph NVIDIA® GeFord supports extern supports four in Max resolution:	ce® GTX al digital depende	1650, 4 monitor nt displa	·GB GDD · via HDM avs;	R5 memory II or Thunde	rbolt™;	l)			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 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole, slim tip AC adapter *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset Memory	Mobile Intel CM 64GB max / 266			ual-chanr	nel capable,	two DE	R4 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		Туре	Surface	Brightness	Aspect (Contrast Ratio	Color Gamut	Viewing Angle	Barraida / tooy	Optional: ThinkPad Ethernet Extension Cable
	15.6" FHD (1920)	x1080)	IPS A	Anti-glare	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 (1920) HDR 400, Dolby Vision	,	IPS A	Anti-glare	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 (3840) 15.6" HDR 400, Dolby Vision	•	IPS A	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°	Kevboard	dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system 6-row, spill-resistant, multimedia Fn keys, LED backlight
	UHD (3840: HDR 500 Tr Dolby Vision Multi-touch	x2160) rue Black, n,	OLED		SDR 400nit, HDR 500nit (peak)	16:9 1	00000:1	1 100% DCI-P3	170°	UltraNav™ Security Security chip	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Multi-touch (opt) Pen	Capacitive-type anti-reflection (A Supports pen a	AR), anti-	smudge	(AS) co	ating	`		• • • • • • • • • • • • • • • • • • • •		System Mgt (opt) Fingerprint reade Color calibration NFC	Intel vPro Technology rTouch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None
Storage RAID (optional) Optical	Up to two M.2 SS M.2 2280 SSD / RAID 0/1 suppo None	/ PCIe N\ ort								Battery Max battery life AC adapter	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 14 hr * Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
Ethernet	Native Intel Ethe						LM (vF	Pro))		Operating system	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN Bluetooth™	Intel Wi-Fi 6 AX Bluetooth 5.0 w	<u>.</u> 200, Wi-F	i 2x2 8	02.11ax -	+ Bluetooth	5.0	o adap	ter		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN SIM card	None None									Mil-Spec test	3-ýear/1-ýr batterý limited onsite service MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



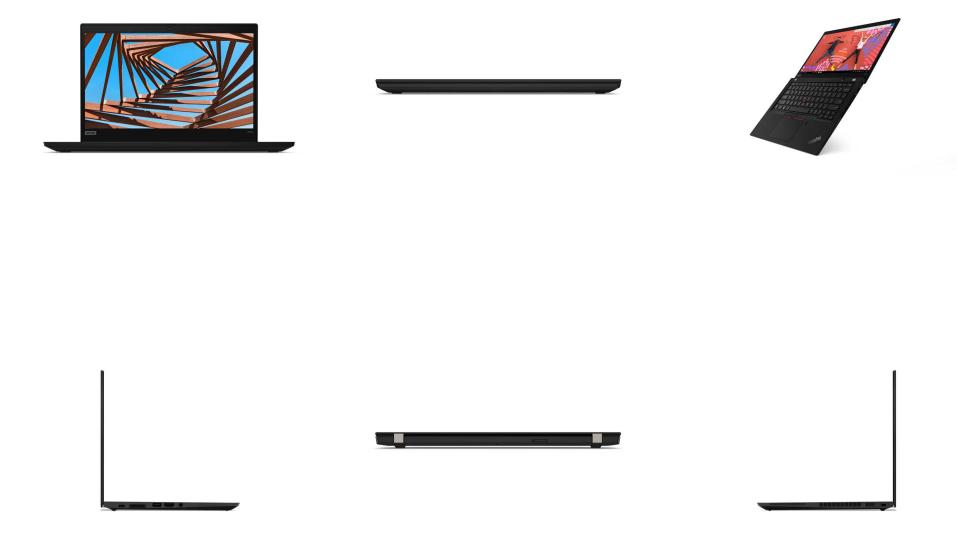
ThinkPad X270 Platform Specifications

Processor	6th Generation I	ntel® Cor	e™ i3 / i5 / i	7 Processor			Dimensions	WxDxH: 12.03" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm			
1 10000001	Processor # of	# of	Base	Mary Trustee	Memory	Processor	Weight	Models No + 3-cell 3-cell 3+6-cell 3+ 6-cell			
		Threads		Frequency Cache	Types	Graphics		Weight 2.79 lb / 1.27 kg 2.98 lb / 1.36 kg 3.33 lb / 1.52 kg			
	i3-6006U		2.0 GHz	- 3MB			Case color	Black			
	i3-6100U		2.3 GHz	- 3MB			Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Glass-Fiber Reinforced Plastic			
	i5-6200U 2	4	2.3 GHz	2.8 GHz 3MB	DDR4-2133	Intel HD Graphics	0				
	i5-6300U		2.4 GHz	3.0 GHz 3MB 3.1 GHz 4MB	-	520	Media reader	er <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)			
	i7-6500U i7-6600U		2.5 GHz 2.6 GHz	3.1 GHZ 4MB 3.4 GHz 4MB	-		Ports	Two USB 3.1 Gen 1 (USB 3.0, one Always On),			
		n Intel Co						USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	or 7th Generation Intel Core i3 / i5 / i7 Processor Processor # of # of Base Max Turbo October Memory Processor							HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
		Threads	Frequency	Frequency Cache	Types	Graphics	WiGig dock (opt)	ThinkPad WiGig dock, mutually exclusive with WWAN (US only)			
	i3-7100U		2.4 GHz	- 3MB			Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
	i5-7200U		2.5 GHz	3.1 GHz 3MB		Intel HD Graphics	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
	i5-7300U 2	4	2.6 GHz	3.5 GHz 3MB	DDR4-2133	620	Camera (ontiona	//HD720p resolution, fixed focus			
	i7-7500U		2.7 GHz	3.5 GHz 4MB			Audio support	HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /			
	i7-7600U		2.8 GHz	3.9 GHz 4MB				dual array microphone, combo audio/microphone jack			
Graphics	Intel HD Graphic				C.		Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
	supports three in			HDMI or USB Typ	e-C;		UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
				, USB Type-C); 40	96x2160@	24Hz (HDMI)	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified			
Chipset	Intel SoC (Syste	m on Chi	p) platform				vPro (optional)	Intel vPro Technology			
Memory				DR4 SO-DIMM so			Fingerprint reade	er Optional: Touch style match on chip fingerprint reader on the palm rest			
D: 1		•		lower memory cont			NFČ (optional)	Near Field Communication			
Display	Some: 12.5" (31	l / .5mm) 16·9 asr	HD (1366X) ect ratio 50	768), anti-glare, L 00:1 contrast ratio	.ED backligi	nt,	Internal battery External battery	Optional: Integrated Li-ion or Li-Polymer 3-cell (23Wh) Li-ion 3-cell (23Wh) or 6-cell (48Wh or 72Wh)			
	Some: 12.5" (31	17.5mm)	HD (1366x)	768), anti-glare, L	ED backlig	nt, IPS,	Max battery life	Models No + 3-cell 3-cell + 3-cell 3-cell + 6-cell 48Wh 3-cell + 6-cell 72Wh			
	300 nits,	16:9 aśp	ect ratio, 8	00:1 contrast ratio	o, 170° view	ing angle	(MobileMark® 2014	Max battery life 6.52 hr 13.04 hr 20.1 hr 26.9 hr			
				x1080), anti-glare 00:1 contrast ratio				* Battery life varies significantly with settings, usage, & other factors			
Multi-touch (opt)					o, i i o view	ing angle	AC adapter	45W slim tip AC adapter or 45W USB Type-C AC adapter			
Storage	System has one H	DD slot or	one M.2 228	0 slot exclusively for	r storage		Operating system	One of the following, configurable by model:			
Ü				ide, 7mm high, Ad				 Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 Windows 10 Home 64 			
				de, 7mm high (e.		SD)					
				e 3.0 x 2, 16Gb/s Gb/s, in WWAN sl		torage.		Windows 10 Pro 64			
	mutually			N and WiGig	0. 40	iciago,	Limited warranty	One of the following, configurable by model:			
Optical	None							1-year depot repair service			
Ethernet		: Intel Eth	ernet Conr	nection I219-V (Ja	cksonville)	. \		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
14/1 441	vPro model:			nection I219-LM (,	Mil-Spec test	MIL-STD-810G military testing			
WLAN	 Realtek® RTL8 			el (WiGig is mutually	y exclusive w	ith WWAN):	I				
				Wi-Fi 2x2 802.11	ac + BT4.1		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
	 Intel Dual Band 	d Wireles	s-AC 8265,	Wi-Fi 2x2 802.11	ac + BT4.1						
Pluotooth™		Vireless-	AC 18265, V	ViGig 802.11ad +	Wi-Fi 2x2	302.11ac + BT4.1					
Bluetooth™	(US only) Bluetooth 4.1 wii	reless in	tegrated in	Wi-Fi + Bluetooth	combo ada	inter					
	* Intel 8265ac / 18.	265ac car	d support BT	4.2 but is limited to E	3T4.1 by Win	dows OS					
WWAN (optional)	One of the followin			el (mutually exclusiv	e with WiGig):					
	Wireless WAN Integrated Make			TC A							
	 Integrated Mob Qualcomm® Sr 	nandrago	ıdand 4G L n™ X7 I T⊏	≀ Е-А, :-А (Sierra Wireles	ss FM7455	1					
	Integrated Mob	oile Broad	lband 4G L	TE,	55 EIVI 455	,					
OIM soud (sout)	Intel XMM™ 71	60 (Fiboo	com L831-E	EAÚ) (EMEA only)							
SIM card (opt)	Micro-SIM card	siot, opt \	erizon LTE	(US) or Lenovo®	Connect (E	MEA) SIM card					
								Lenovo			



ThinkPad X280 Platform Specifications

Processor	7th Generation Intel® Core™ i3 / i5 Processor * i3-7130U is NOT available in US and EMEA; i5-7200U is NOT available in US							US	Dimensions WxDxH: 12.11" x 8.26" x 0.69-0.70"; 307.7mm x 209.8mm x 17.4-17.4 Weight FHD non-touch model: 2.49 lb / 1.13 kg;				
	Processor	# of	# of	Base Frequency	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			
	i3-7130U i5-7200U i5-7300U	2	4	2.7 GHz 2.5 GHz 2.6 GHz	- 3.1 GHz 3.5 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			
	or 8th Generation Intel Core i3 / i5 / i7 Processor								Smart card reade	er Optional: Smart card reader			
		# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card Two USB 3.1 Gen 1 (one Always On),			
	i3-8130U i5-8250U i5-8350U i7-8550U i7-8650U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	4MB 6MB 6MB 8MB	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 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, 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			
Graphics	Intel HD Gra supports exi supports thr Max resoluti	terna ee in	l digital n depende	nonitor via ent displavs	HDMI or U	SB Typ	e-C;	30Hz (HDMI)	Monitor cable (optional) Bundled Accy	* 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 Optional: ThinkPad Ethernet Extension Adapter Gen 2			
Chipset Memory	Intel SoC (System on Chip) platform 4GB, 8GB, or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * 4GB memory is NOT available in US and EMEA * System clocks down for processors with lower memory controller								Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus Audio support HD Audio, Realtek® ALC3287 codec /				
Display	Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS,							,	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack				
Multi-touch (opt)	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle							ng angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Storage	*FHD non-touch model is NOT available in US One of the following, configurable by model: • M.2 SSD / SATA 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)							M 2 PCIe NVMe)		Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology or Optional: Touch style match on chip fingerprint reader on the palm rest,			
Optane™ memory Optical									NFC (optional)	anti-spoofing technology Near Field Communication			
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2								Battery Max battery life	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 16.6 hr			
WLAN + Bluetooth™	Intel Dual Ba * Intel 8265ad	and V	Vireless-	AC 8265, V BT4.2 but is	Vi-Fi 2x2 80 limited to BT)2.11ac 4.1 by V	+ Bluetootl Vindows OS	h 4.1, M.2 card	AC adapter	*Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
WWAN (optional)	One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE, 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 * For non-WWAN model, it means the model is NOT WWAN upgradable									Optional: Windows® 10 Home 64 or Windows 10 Pro 64 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			
SIM card (opt)									Mil-Spec test	MIL-STD-810G military testing			
Note: The specifica			` ′		rogione				Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Lenov			



ThinkPad X390 Platform Specifications

15-8265U 1	/ FHD Multi-touch	Models FHD Non-touch HD / FHD Multi-to				Dimensions		8th Generation Intel® Core™ i3 / i5 / i7 Processor								Processor			
15.8365U 1.6 GHz 1.0 Hz 5MB 1.8 GHz 1.0 Hz 5MB 1.8 GHz 1.0 Hz 5MB 1.8 GHz 1.0 Hz 5MB 1.8 GHz 1.0 Hz	-	mm _			Carbon Fiber					Cache					-				
Graphics Briti Understand Briti	x 217.2mm x 16.9mm 28" x 8.55" x 0.67"				3	PPS		0 1:							4	2			
Graphics Intel UHD Graphics 620 in processor: supports external digital monitor via HDMI or USB Type-C; supports three independent displays: Max resolution: 4968x204 660Hz (Thunderbolt); 4096x2160@24Hz (HDMI) Memory Agas 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	FHD Multi-touch	HD FF	Н	FHD Non-touch			Weight			DDR4-2400					8	4	_		
Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports external digital monitor via HDMI or USB Type-C; supports three independent displays. Max resolution: 4096x2604 @ 604z (Thunderbott); 4096x2160 @ 24Hz (HDMI)	-	-									_				}		_		
Chipset Intel ScC (System on Chip) platform Memory BGB 1168 by 3298 / 2400MHz DDR4 / soldered to systemboard, no sockets Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation Ports Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None None Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation None N		Black ial Display cover: Carbon Fiber (FHD non-touch only) or PPS; Bottom: Magnesium/Aluminum					Case material	MI)	4Hz (HD		В Туре	OMI or US	cessor; or via HI splays;	n proc nonito	l digital m depende	ernal ee inc	ID G	ntel UH upport	·
Size Resolution Type Surface Brightness Aspect Contrast Ratio Color Newlind Angel	livery and DisplayPort).	tion of Power Delivery a	Intel SoC (System on Chip) platform 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation								Chipset Memory								
13.3" FHD (1920x1080) IPS Anti-glare 300 nits 16.9 (non-fouch) 72% 170° (multi-touch) 72% 170° (multi-touch) 13.3" FHD (1920x1080) 13.3" FHD (19	SD card reader,	dels) and microSD card	nector, N models) a	rnet extension conn no-SIM card (WWAI	Etherr f nan	HDMI 1.4b, E combo slot of		Angle	Gamut	Ratio	Ratio								Display
## PHD (1920x1080) IPS Anti-glare 300 nits 16:9 (non-touch) 72% 170° 700.1 7	reader,	onal smart card reader	k, optional s	rophone combo jacł	micro	headphone /		90°	45%		16:9	250 nits	nti-glare	N A	88) T	66x768	D (13	3.3" HI	
13.3" ThinkPad Privacy IPS Anti-glare 400 nits 16:9 1000:1 72% 178° Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage M. 2 2280 SSD / SATA 6.0Gb/s M. 2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Multi-touch (opt) Memory H10 with Solid State Storage, M. 2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Optical None Cell No	wer than theoretical speed	onitor Adapter Idapter	n <i>transfer spee</i> GA Monitor <i>I</i> /GA Adapte	<i>ny factors, actuál data</i> Lenovo HDMI to VO Lenovo USB-C to V	n man A: L GA: L	* Depending or HDMI to VGA USB-C to VG	Monitor cable (optional)	170°	12%	(non-touch 700:1	16:9	300 nits	nti-glare	PS Ar			`		
Storage • 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, M.2 2280 SPC / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 • M.2 2280, PCIe NVMe 3.0 x 4 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 • None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) WLAN (optional) Bluetooth™ Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi 2x2 802.11ac + Bluetooth combo adapter WWAN (optional) Vone of the following, configurable by model: • Integrated Mobile Broadband 4G LTE, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) • Integrated Wobile Broadband 4G			sion Adapter	ad Ethernet Extens	inkPa	Optional: Thi	Bundled Accy	178°	72%	1000:1	16:9	400 nits	nti-glare	PS Ar			hinkÞ	3.3" Th	
* M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 * 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, M.2 2280, PCle NVMe 3.0 x 4 Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) One of the following, configurable by model: * Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Intel Wireless, integrated in Wi-Fi + Bluetooth 5.0 * Intel wireless, integrated in Wi-Fi + Bluetooth 5.0 * Integrated Mobile Broadband 4G LTE, Fibocom L830-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable * Integrated Warranty * One of the following, configurable by model: * Integrated Mobile Broadband 4G LTE-A, Fibocom L830-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable * Operating system Optional: Windows* 10 Home 64 or Windows 10 Pro 64 * Integrated warranty One of the following, configurable by model: * Integrated Windows* 10 Home 64 or Windows* 10 Pro 64 * Integrated Windows* 10 Home 64 or Windows* 10 Pro 64 * Integrated warranty One of the following, configurable by model: * 1-year depot repair service * 3-year/1-yr battery depot repair service	HD720p camera with ThinkShutter camera privacy, fixed focus													Multi-touch (opt)					
Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) One of the following, configurable by model: 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) One of the following, configurable by model: 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 Optional: Tuck sylven and buttonless Mylar surface muscless and buttonless Mylar sur	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec /								torage	.0 x 2	, PCIe 3 , PCIe 3 with Sol	VMe, VMe, H10 v	/ PCIe N / PCIe N Memory	SSD / SSD / ne™ N	2280 2242 Opta	M.2 2 M.2 2 Intel (
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 WLAN (<i>optional</i>) WLAN (<i>optional</i>) Doe of the following, configurable by model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (<i>optional</i>) WWAN (<i>optional</i>) One of the following, configurable by model: 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 *Top of the following, configurable by model: Operating system Optional: Near Field Communication Battery Integrated Li-ion 48Wh battery, supports Rapid Charge (characters of the following) with 65W USB Type-C AC adapter MobileMark® 2014: 17.6 hr *Battery life varies significantly with settings, usage, & other factors of the following, configurable by model: Operating system Optional: One of the following, configurable by model: 1-year depot repair service 1-year depot repair service	cklight	optional LED backlight	keys, option	ant, multimedia Fn l	esista	6-row, spill-re	Keyboard						4	3.U X	e invivie 3	PCIe	2280,		Optical
WLAN (optional) One of the following, configurable by model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: 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 WLAN (optional) One of the following, configurable by model: Integrated Li-ion 48Wh battery, supports Rapid Charge (chawith 65W USB Type-C AC adapter MobileMark® 2014: 17.6 hr *Battery Integrated Li-ion 48Wh battery, supports Rapid Charge (chawith 65W USB Type-C AC adapter MobileMark® 2014: 17.6 hr *Battery Integrated Li-ion 48Wh battery, supports Rapid Charge (chawith 65W USB Type-C AC adapter MobileMark® 2014: 17.6 hr *Battery Integrated Li-ion 48Wh battery, supports Rapid Charge (chawith 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: 1-year depot repair service 3-year/1-yr battery depot repair service		Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) Security Security Power-on password, hard disk password, supervisor password, security keyh							Ethernet										
WWAN (optional) One of the following, configurable by model: 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 Max battery life Max battery life AC adapter AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1 T-WINDOWS 170-C AC adapter MobileMark® 2014: 17.6 hr Battery life varies significantly with settings, usage, & other factors AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1 -year depot repair service 3 -year/1-yr battery depot repair service	the palm rest	One of the following, configurable by model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 System Mgt (opt) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest NFC (optional) Near Field Communication																	
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 Max battery life AC adapter Operating system Optional: 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	narge up to 80% in 1hr)	Rapid Charge (charge ι	orts Rapid (48Wh battery, supp	ion 4	Integrated Li-	Battery		ter	combo ada _l	tooth o								
Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service	rs	 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 Max battery life MobileMark® 2014: 17.6 hr * Battery life varies significantly with settings, usage, & other factors 							(=)										
1-year depot repair service 3-year/1-yr battery depot repair service		Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64																	
3-year/1-yr battery limited onsite service		3	rvice	pair service ery depot repair ser	ot rep	1-year depo3-year/1-yr													
Mil-Spec test MIL-STD-810G military testing																			
Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		HS-compliant	1; RoHS-cor	ENERGY STAR® 7.1	er; E	EPEAT™ Silv	Environment												





дома





AMD

ThinkPad X395 Platform Specifications

Number Cores Threads Frequency Frequency Cache Controller Graphics Ryzen 3 Pro 3300U 4 4 2.1 GHz 3.5 GHz 4MB L3 Pro 3500U 5 Pro 3500U 5 Pro 3500U 6 Pro 3700U 6 Pro 3700U 7 P	en 2,			
Ryzen 3 4 4 2.1 GHz 3.5 GHz 2MB L2 / 4MB L3 Ryzen 5 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 / 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 2MB L2 /	SIM card			
Pro 3300U 4 4 8 2.1 GHz 3.3 GHz 4MB L3 Ryzen 5 Pro 3500U 4 8 2.1 GHz 3.7 GHz 4MB L3 Ryzen 7 Pro 3700U 4 8 2.3 GHz 4.0 GHz 4MB L3 Ryzen 7 AMD Radeon Vega 6 Vega 8 or Vega 10 Graphics in processor: Graphics Graphics Graphics Graphics Graphics Graphics Graphics Graphics Graphics Case material Display cover: PPS/GF; Bottom: Magnesium/Aluminum Smart card reader Optional: Smart card reader Media reader MicroSD card reader, in the combo slot with nano-SI Graphics One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2 (with the function of Pow	en 2,			
Ryzen 5 Pro 3500U 4 8 2.1 GHz 3.7 GHz 4MB L3 DDR4-2400 Radeon Vega 8 Graphics Ryzen 7 Pro 3700U 4 8 2.3 GHz 4.0 GHz 4MB L3 DDR4-2400 Radeon Vega 10 Graphics in processor: AMD Radeon Vega 6 Vega 8 or Vega 10 Graphics in processor: Ryzen 7 AMD Radeon Vega 6 Vega 8 or Vega 10 Graphics in processor: AMD Radeon Vega 6 Vega 8 or Vega 10 Graphics in processor:	en 2,			
Ryzen 7 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Radeon Vega 10 Graphics MicroSD card reader, in the combo slot with nano-SI One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2 (with the function of Pow	en 2,			
Graphics AMD Radeon Vega 6 Vega 8 or Vega 10 Graphics in processor: two USB 3.1 Type-C Gen 2 (with the function of Pow	wer Delivery and DisplayPort),			
supports external digital monitor via USB-C or HDMI; supports three independent displays: combo slot of nano-SIM card (WWAN models) and r	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,			
Chipset AMD SoC (System on Chip) platform Memory 8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation * Depending on many factors, actual data transfer speed many factors actually 2666MHz but run at 2400MHz due to AMD limitation * Depending on many factors, actual data transfer speed many factors actually 2666MHz but run at 2400MHz due to AMD limitation * Depending on many factors, actual data transfer speed many factors actu	apter			
Display Size Resolution Type Surface Brightness Ratio Ratio Contrast Ratio Ratio Color Viewing Gamut Angle Camera (optional) One of the following, configurable by model:	en 2			
13.3" HD (1366x768) TN Anti-glare 250 nits 16:9 300:1 45% 90° + HD720p camera with ThinkShutter camera privacy.				
13.3" FHD (1920x1080) IPS Anti-glare 300 nits 16:9 800:1 (non-touch) 700:1 (multi-touch) 170° 170° 4udio support 170° 1	/			
FHD (1920x1080) 13.3" ThinkPad Privacy Guard IPS Anti-glare 400 nits 16:9 1000:1 72% 178° Keyboard 178° Keyboard 6-row, spill-resistant, multimedia Fn keys, optional Lt 178° UltraNav™ TrackPoint® pointing device and buttonless Mylar sur	LED backlight urface multi-touch touchpad			
Multi-touch (ant) On-cell touch supports 10-finger gesture (EHD only) Security Power-on password, hard disk password, supports 10-finger gesture (EHD only)	or password, security keyhole			
Storage • M.2 2280 SSD / SATA 6.0Gb/s Storage • M.2 2280 SSD / SATA 6.0Gb/s System Mgt Discrete TPM 2.0, TCG Certified DASH Management				
M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 Optical None M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 Fingerprint reader <i>Optionals</i> : Touch style match on chip fingerprint read NFC None	ader on the palm rest			
Ethernet Native Realtek® RTL8153 Gigabit Ethernet connection via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 Battery Integrated Li-ion 48Wh battery, supports Rapid Char with 65W USB Type-C AC adapter	arge (charge up to 80% in 1hr)			
WLAN (optional) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Battery life varies significantly with settings, usage, & other states of the combo adapter. * Battery life varies significantly with settings, usage, & other states of the combo adapter.	her factors			
WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable Operating system Windows® 10 Home 64 or Windows 10 Pro 64				
 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 				
* For non-WWAN model, it means the model is NOT WWAN upgradable SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM 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 repair service 3-year/1-yr battery depot repair service				
Mil-Spec test MIL-STD-810G military testing				
Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-complia	liant			

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

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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.

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Product Specifications Reference Version 546, August 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

► New model(s)

None

▶ Others

None

Changes in this update

►None

Withdrawals in this update

► Withdrawn product(s)

None











ThinkPad X1 Tablet (3rd Gen) Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Control buttons	Power button, volume control button, reset switch
	Processor Number # of Cores Threads Frequency Base Frequency Frequency Max Turbo Frequency Cache Memory Types Graphics Processor Graphics	Dock Monitor cable (opt	Optional: Hybrid dock
	i5-8250U 1.6 GHz 3.4 GHz 6MB	Adapter (optional)	USB-C to RJ45: Lenovo USB-C to Ethernet Adapter USB-C to VGA: Lenovo USB C to VGA Plus Power Adapter
	1.7 GHz 3.6 GHz 6MB LPDDR3-2133 Intel UHD Graphics 620		USB-C to HDMI: Lenovo USB-C to HDMI Plus Power Adapter
	1.6 GHZ	Camera	Front camera: 2.0-megapixel, fixed focus Rear camera: 8.0-megapixel, auto focus
Graphics	Intel UHD Graphics 620 in processor, supports external digital monitor via USB Type-C	IR Camera Audio support	Optional: IR camera, fixed focus (Not available with NFC) Realtek® ALC3278 codec / stereo speakers, 1W x 2 /
Chipset Memory	Intel SoC (System on Chip) platform 8GB, or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Pogo keyboard	two microphones, combo audio/microphone jack Magnetic attached thin keyboard, with TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch, backlit
Display	13.0" (330mm) QHD+ (3000x2000), glossy, LED backlight, IPS, anti-figerprint display with Corning® Gorilla® Glass, WideView (160° viewing),	Keyboard color	Black
Multi-touch Pen Kick stand	400 nits, 3:2 aspect ratio, 1200:1 contrast ratio Capacitive touch panel, supports ten-finger gesture Optional: Lenovo Pen Pro or Lenovo Active Pen (ThinkPad Pen Pro) for multi-touch display Opening angle up to 170 degrees	Security Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Kensington lock slot Discrete TPM 2.0 TCG Certified Intel vPro Technology r Optional: Touch style Fingerprint reader Near Field Communication (Not available with the IR camera)
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)	Battery	Integrated Li-Ion 42Wh battery
Optical Storage extension	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) None nOne MicroSD card reader, in the combo slot with nano-SIM card, support	Max battery life AC adapter	MobileMark® 2014: 9.5 hrs * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	USH-I, microSDHC, microSDXC	Light sensor	Ambient Light Sensor
Ethernet	None	G-sensor Gyroscope	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module
WLAN	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	GPS .	
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Preload	Some: Windows 10 Pro 64 Some: Windows 10 Home 64
WWAN (optional)	Integrated Mobile Broadband 4G LTE-A, Qualcomm [®] Snapdragon [™] X7 LTE-A (Sierra Wireless EM7455)	Limited warranty	One of the following, configurable by model:
SIM card (opt)	Nano-SIM card slot, in the combo slot with microSD card reader		 1-year depot repair service 3-year/1-yr battery depot repair service
Dimensions	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		3-year/1-yr battery limited onsite service
Weight	Tablet only: starting at 1.96 lb (0.89kg)	Mil-Spec test	MIL-STD-810G military testing
Case color Case material	Tablet+keyboard: starting at 2.8 lb (1.27kg) Black Magnesium/Aluminum	Environment	EPEAT™ Silver, GREENGUARD, Low Halogen, RoHS
Smart card reade Ports	rNone Two USB 3.1 Type-C Gen 1 / Thunderbolt 3 / Power Delivery 2.0, 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		













ThinkPad L380 Yoga Platform Specifications

Processor	7th Generation Intel® Core™ i3 / i5 Processor	Dimensions WxDxH: 12.67" x 8.82" x 0.74"; 322mm x 224.2mm x 18.8mm		
	Processor # of # of Base Max Turbo Cache Memory Processor	Weight Starting at 3.44 lb / 1.56 kg Case color Black or Silver		
	Number Cores Threads Frequency Frequency Types Graphics i3-7020U 2 4 2.3 GHz // 3MB REPLACED Intel HD Graphics	Case material Display cover: Aluminum		
	i5-7200U 2 4 2.5 GHz 3.1 GHz 3MB DDR4-2133 Intel HD Graphics 620	Bottom: GFRP		
	8th Generation Intel Core i3 / i5 / i7 Processor	Smart card readerNone Media reader MicroSD card reader		
	Discourse # of # of Doos May Turks Marrow Discourse	Media reader MicroSD card reader Ports Two USB 3.1 Gen 1 (one Always On),		
	Number Cores Threads Frequency Frequency Cache Types Graphics	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Displ		
	i3-8130U 2 4 2.2 GHz 3.4 GHz 4MB	HDMI 1.4b, Ethernet extension connector, headphone / microphone coml microSD card reader, security keyhole	bo jack,	
	16 GHz 3.4 GHz 6MB DDR4-2400 Intel UHD Graphics	* Depending on many factors, actual data transfer speed may be lower than theoret	tical speed	
	i5-8350U 4 8 1.7 GHz 3.6 GHz 6MB 620	Monitor cable HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter (optional) USB-C to VGA: Lenovo USB-C to VGA Adapter	-	
		(optional) USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C;	Camera 720p: HD720p resolution, low light sensitive, fixed focus		
	supports three independent displays;	IR & 720p: IR camera and HD720p camera, fixed focus		
	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	World facing: Rear camera, 5MP resolution, auto focus Audio support HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2	2W v 2 /	
Chipset Memory	Intel SoC (System on Chip) platform Up to 32GB max / 2400MHz DDR4, dual-channel capable,	dual array microphone, headphone / microphone combo jack	.W X Z /	
wemory	two DDR4 SO-DIMM sockets	Keyboard 6-row, multimedia Fn keys, optional LED backlight		
	* System clocks down for processors with lower memory controller	UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-		
Display	13.3" (338mm) FHD (1920x1080), glossy, LED backlight, IPS, 300 nits,	Security Power-on password, hard disk password, supervisor password, security k Discrete TPM 2.0, TCG Certified	keyhole	
Multi-touch (opt)	16:9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Capacitive-type multi-touch, AR (anti-reflection), supports 10-finger gesture	System Mgt (opt) Intel vPro Technology		
Hinge ` ' / ´	Yoga hinge, 360 degree	Fingerprint reader Optional: Touch style fingerprint reader on the keyboard bezel,		
Convert-mode Pen	Laptop, tent, stand, yoga and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board garage	anti-spoofing technology NFC (optional) Near Field Communication (mutually exclusive with smart card reader)		
Storage	One of the following, configurable by model:	Battery Integrated Li-lon 45Wh battery, supports Rapid Charge (charge up to 80%)	% in 1hr)	
Otorage	 M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) 	with 65W USB Type-C AC adapter	, , , , , , ,	
Ontono Momoru	M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (é.g. xxxGB SSD M.2 PCIe NVMe) None	Max battery life MobileMark® 2014: 12.85 hrs * Battery life varies significantly with settings, usage, & other factors		
Optane Memory Optical	None	AC adapter 45W or 65W USB Type-C AC adapter		
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro))	Preload Windows® 10 Home 64 or Windows 10 Pro 64		
	via optional ThinkPad Ethernet Extension Cable Gen 2	Limited warranty One of the following, configurable by model:		
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Wireless card supports BT4.2 but is limited to BT4.1 by Windows OS	1-year depot repair service3-year/1-yr battery depot repair service		
WWAN	None	3-year/1-yr battery limited onsite service		
SIM card	None	Mil-Spec test MIL-STD-810G military testing		
		Environment EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant		

Lenovo March 2019





















ThinkPad L390 Yoga Platform Specifications

Processor	8th Generation Intel® Core™ i3 / i5 / i7 Processor								Smart card readerNone			
	Processor Number		# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (with the function of Power Polivery and DisplayPort)		
	i3-8145U i5-8265U i5-8365U	4	4 8 8	2.1 GHz 1.6 GHz 1.6 GHz	3.9 GHz 3.9 GHz 4.1 GHz	DIVID	DDR4-2400	Intel UHD Graphics 620	Monitor cable	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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
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)								(optional) Bundled	USB-C to VGA: USB-C to VGA + Power Adapter: USB-C to HDMI: USB-C to HDMI + Power Adapter: USB-C to DP: USB-C to RJ45: Lenovo USB-C to VGA 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		
Chipset Memory				ip) platform DR4, dual-c		pable, t	wo DDR4 S	SO-DIMM sockets	Accessories (optional)	USB-C to USB-A: USB-C to USB-C: Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2M		
Display Multi-touch Hinge Multi-mode Pen (optional)	13.3" (338mm) FHD (1920x1080), glossy, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 72% gamut, 170° viewing angle Capacitive-type multi-touch, AR (anti-reflection), supports 10-finger gesture Yoga hinge, 360 degree Notebook, stand, tent, tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board garage								Camera Audio support	720p: HD720p resolution, low light sensitive, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus (black model only) World facing: 5MP resolution, auto focus (mutually exclusive with fingerprint reader) HD Audio, Realtek ALC3287 codec, Dolby® Audio™ Premium / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack		
Storage	 M.2 SSI 	D / SAT	A 6.0Gb						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch		
Optane™ Memory Optical	 M.2 (228) Intel Op M.2 228 Y Optional: I None 	80) SS tane M 0, PCI Intel O	D / PCIe lemory H e NVMe ptane Me	emory H10	Cle 3.0 x 4 lid State S	torage,				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 (mutually exclusive with World facing camera) Near Field Communication		
Storage Optical	 M.2 SSI 	D / SAT	A 6.0Gb	rable by mod /s (e.g. xxx , PCIe 3.0)	GB SSD M	l.2) s (e.g. x	xxGB SSD	M.2 PCIe NVMe)	Battery Max battery life	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 12.17 hrs		
Ethernet	Native Inte	el Ethe	rnet Con	nection I21	9-V (<i>Non-</i>	vPro) o	r I219-LM (vPro)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
	via optiona Lenovo US	al Thin SB-C t	kPad Eth o Ethern	ernet Exte	nsion Cabl	e or			Preload	Windows® 10 Home 64 or Windows 10 Pro 64		
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								Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service		
WWAN	None									3-year/1-yr battery limited onsite service		
Dimensions Weight Case color Case material	WxDxH: 12.67" x 8.82" x 0.74"; 321.8mm x 224.2mm x 18.8mm Starting at 3.44 lbs / 1.56 kg Black or Silver Display cover: Magnesium / Aluminum Bottom: GFRP							m	Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
										Langua		











ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Smart card readerl	None		
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Intel HD Graphics 620	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, HDMI 1.4, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader		
	8th Generation Intel Core i5 / i7 Processor	WiGig dock I	* Depending on many factors, actual data transfer speed may be lower than theoretical speed None HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter		
	Processor # of # of Base Max Turbo Cache Memory Types Processor Graphics		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
	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 GH		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 * WWAN models and HDR panel models can not support IR camera		
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C;		HD Audio, Realtek® ALC3286 codec, Dolby® Audio™ Premium / stereo speakers, 1W x 2 / dual array microphone, headphone / microphone combo jack		
	supports three independent displays; Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)		6-row wave keyboard (rise & fall), spill-resistant, multimedia Fn keys, LED backlit TrackPoint® pointing device and 3+2 buttons multi-touch clickpad		
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Security chip I	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology		
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	Fingerprint reader	Touch style match on chip fingerprint reader on the palm rest Near Field Communication		
	Some: 14.0" (355mm) WQHD (2560x1440), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, IPS Some: 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, LED backlight, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle, IPS	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 * Battery life varies significantly with settings, usage, & other factors		
Multi-touch	Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge), supports 10-finger gesture, reduces overall display brightness by 10%		45W or 65W USB Type-C AC adapter Ambient Light Sensor		
Hinge Convert-mode	Yoga hinge, 360 degree Laptop, tent, stand, and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	G-sensor Gyroscope	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module		
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)		Windows® 10 Pro 64		
Optical Ethernet	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) None Native Intel Ethernet Connection WGI219-LM (<i>vPro</i>)		One of the following, configurable by model: 1-year depot repair service 2-year(depot repair service)		
Linernet	via optional ThinkPad Ethernet Extension Cable		3-year/1-yr battery depot repair service MIL-STD-810G military testing		
	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		EPEAT™ Silver; ENERGY STAR®; RoHS-compliant		
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter				
() /	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				
Dimensions Weight	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb (1.4kg)				
Case color Case material	Black or silver Display cover: Bottom: Carbon-Fiber and Glass-Fiber hybrid; magnesium-PPS hybrid				
			Lenovo		













ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor	8th Ge	eneration In	ntel® Cor	re™ i5 /	i7 Proce	ssor					Smart card reade	ar None
	Proces Numbe i5-8265 i5-8365 i7-8565	ssor # of Cores 5U 5U 4	# of Threads 8	Bas	e Max ency Fred Hz 3.9 Hz 4.1 Hz 4.6	Turbo	B LPDD	D2 2122	Proce Grap Intel U Graphic	hics JHD	Media reader Ports Monitor cabl	None None 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 Optional: Lenovo HDMI to VGA Monitor Adapter
Graphics	Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C / Thunderbolt; supports three independent displays; Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)									DMI)	Bundled Accy Camera (optional)	
Chipset Memory	Intel S 8GB o	oC (Syster r 16GB / 2	m on Ch 133MHz	ip) plat z LPDD	form R3 / solo	lered to sy	stemboa	ard, no s	ockets		Audio support	HD Audio, Realtek® ALC1012L codec, Stereo speakers, 2W x 2, 0.8W x 2, Dolby® Audio™ Atmos / 4 array 360-degree far-field microphones, headphone / microphone combo jack
Display	Size	Resolut	tion	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad
	14.0"	FHD (1920) Low Power FHD (1920)		IPS	Glossy	380 nits	16:9	800:1	72%	170°	Security Security chip System Mgt Fingerprint reade NFC	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Optional: Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Optional: Near Field Communication
	14.0"	ThinkPad P Guard		IPS	Glossy	380 nits	16:9	1000:1	72%	170°	Battery	Integrated Li-Ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
	14.0"	WQHD (2560x1440	0)	IPS	Glossy	280 nits	16:9	800:1	72%	170°	Max battery life AC adapter	MobileMark® 2014: 18.1 hrs * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	14.0"	UHD (3840: Dolby Vision HDR400		IPS	Glossy	470 nits	16:9	1400:1	90%	170°	G-sensor Gyroscope GPS	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module
Multi-touch Hinge Convert-mode	suppo Yoga h	citive-type r rts 10-finge ninge, 360 o o, tent, star	er gestu degree	re	(anti-refl	ection), AS	S (anti-sı	mudge),			Preload	One of the following, configurable by model: • Windows® 10 Pro 64 • Windows 10 Home 64
Pen Storage	Thinki One of	Pad Pen Pr the following 2280 SSD	o, active g, configu	e pen fo urable by	model:	ouch displa	y, on-bo	ard rech	argeat	ole	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
	M.2Intel	2280 SSD Optane M	/ PCIe I emory F	NVMe, 110 witl	PCIe 3.0 h Solid S		ge,				Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Optane™ Memor Optical	M.2 y Intel O None	2280, PCIe ptane Men	e NVMe nory H1	3.0 x 4 0	ļ						Limioninent	EFEAT - Silver, ENERGY STAR 7.1, NOTIS-compliant
Ethernet		Intel Ether									7	
WLAN Bluetooth™		/ireless-AC										
WWAN (optional) SIM card (opt)	nal) One of the following, configurable by model: • 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									M.2 card		
Dimensions Weight Case color Case material	Startin Iron G	y cover:	b (1.36k	:g) um;	"; 323	8mm x 218	mm x 15	5.5mm				
												Lenovo













ThinkPad X380 Yoga Platform Specifications

Processor	Processor # of	# of	Pe™ i3 / i5 / i7 Processor Base Max Turbo Cache Memory Types Processor	Dimensions Weight	<i>WxDxH</i> : 12.34" x 8.75" x 0.72"; 313.5mm x 222.2mm x 18.2mm Starting at 3.17 lb (1.43kg)
		Threads 4	Frequency Frequency Graphics	Case color Case Material	Black or silver Carbon-Fiber Hybrid
	i3-8130U 2 i5-8250U i5-8350U i7-8550U 4	8	2.2 GHz 3.4 GHz 4MB 1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB DDR4-2400 Graphics 620		or Optional: Smart card reader (mutually exclusive with NFC) One microSD card slot (microSD, microSDHC, microSDXC), UHS-I Two USB 3.1 Gen 1 (one Always On), Ethernet extension connector,
	i7-8650U		1.9 GHz 4.2 GHz 8MB		one USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4b, microSD card reader, nano-SIM card slot (WWAN models), headphone / microphone combo jack
Graphics	supports externa supports three in Max resolution:	al digital ndepende 4096x23	304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	WiGig dock Monitor cable (optional)	*Depending on many factors, actual data transfer speed may be lower than theoretical speed None USB-C to VGA: Lenovo USB-C to VGA Plus Power Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Chipset	Intel SoC (Syste			Camera	'
Memory	* System clocks	down for	z DDR4 / soldered to systemboard, no sockets r processors with lower memory controller	Camera	One of the following, configurable by model: 720p: HD720p camera, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus
Display	300 nits, 16:9 as	pect rati	920x1080), LED backlight, IPS o, 800:1 contrast ratio, 170° viewing angle	Audio support	HD Audio, Conexant® CX11771 codec / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack
Multi-touch Hinge	supports 10-fing Yoga hinge, 360	er gestui	ch, AR (anti-reflection), AS (anti-smudge), re	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and 3+2 buttons Mylar surface multi-touch click pad
Convert-mode Pen	Laptop, tent, sta	nd, yoga	and tablet pen for multi-touch display, on-board rechargeable	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified
Storage	Some: M.2 SSD) / SATA) / PCle l	6.0Gb/s (e.g. xxxG SSD) NVMe, PCle 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCle NVN	e) Fingerprint reade	Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication (mutually exclusive with smart card reader)
Optical Optane Memory	None None			NFC (optional) Battery	Li-Ion 51Wh battery
Ethernet	Native Intel Ethe via optional Thin	rnet Cor kPad Eth	nnection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) nernet Extension Cable	Max battery life	MobileMark® 2014: 13.6 hrs * Battery life varies significantly with settings, usage, & other factors
WLAN	Intel Dual Band	Wireless-	-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card	AC adapter	45W or 65W AC adapter (slim tip), 45W or 65W USB Type-C AC adapter
Bluetooth™	* Intel 8265ac ca Bluetooth 4.1 wi	ard suppo reless, in	orts BT4.2 but is limited to BT4.1 by Windows OS itegrated in Wi-Fi + Bluetooth combo adapter	Light sensor G-sensor/ eCompass	Ambient Light Sensor 3D accelerometer and 3D magnetometer 3D compass
WWAN (optional)	Integrated Mobil	e Broadb	oand 4G LTE, om L830-EB), M.2 card (EMEA only)	Gyroscope	3D gyrometer
SIM card (opt)	Nano-SIM card	slot	on Loso-Eb), w.z caru (EMEA Only)	Preload	Some: Windows® 10 Home 64 Some: 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
				Mil-Spec test	MIL-STD-810G military testing
				Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant
					Longvo

















ThinkPad X390 Yoga Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Smart card reade	rOptional: Smart card reader
	Processor # of # of Base Max Turbo Cache Mamary Types Processor	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card
	Number Cores Threads Frequency Frequency Cache Memory Types Graphics i5-8265U 4 8 1.6 GHz 3.9 GHz 6MB	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 Display Port),
	15-836511 / 8 1.6 GHz / 1.1 GHz 6MB		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),
	i7-8565U 4 8 1.8 GHz 4.6 GHz 8MB DDR4-2400 Graphics 620		HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,
	i7-8665U 4 8 1.9 GHz 4.8 GHz 8MB		headphone / microphone combo jack, optional smart card reader,
Graphics	Intel UHD Graphics 620 in processor only;	-	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	supports external digital monitor via HDMI or USB Type-C;	Monitor cable	USB-C to HDMI: Lenovo USB-C to HDMI Adapter
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Chipset	Intel SoC (System on Chip) platform	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2
Memory	8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation	Camera	One of the following, configurable by model:
Display	13.3" (337.8mm) FHD (1920x1080), LED backlight, IPS, Glossy, 300 nits,	-	 HD720p camera, with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, with ThinkShutter camera privacy, fixed focus
2.00.00	16:9 aspect ratio, 800:1 contrast ratio, Color Gamut 72%, 170° viewing angle,	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Pre-
Multi-touch	capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge) supports 10-finger gesture		mium / dual array microphone, headphone / microphone combo jack
Hinge	Yoga hinge, 360 degree	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Convert-mode	Laptop, tent, stand and tablet	Security	Power-on password, hard disk password, supervisor password, security keyhole
Pen	ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	Security chip	Discrete TPM 2.0 TCG Certified
Storage	 M.2 2280 SSD / SATA 6.0Gb/s M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 	System Mgt (opt)	Intel vPro Technology
	 M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 	Fingerprint reader NFC (optional)	rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
	 Intel Optane Memory H10 with Solid State Storage, M.2 2280, PCle NVMe 3.0 x 4 	Battery	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Optane™ memory	Optional: Intel Optane Memory H10		with 65W USB Type-C AC adapter
Optical	None	Max battery life	MobileMark® 2014: 14.5 hrs * Battery life varies significantly with settings, usage, & other factors
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	AC adapter	45W or 65W USB Type-C AC adapter
WLAN	One of the following, configurable by model:	Light sensor	None
VVLAIN	 Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 	G-sensor Gyroscope	3D accelerometer 3D gyrometer
Bluetooth™	 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter 	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WWAN (optional)	One of the following, configurable by model:	Limited warranty	One of the following, configurable by model:
vvvAiv (optional)	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, 	1	1-year depot repair service
	M.2 card (EMEA only)		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable	Mil-Spec test	MIL-STD-810G military testing
Dimensions	WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Weight	Starting at 2.85 lb (1.29kg)		ELEM Silver, EMERICAL CHART 1.1, HOLIO COMPRIGHT
	Black or silver (Silver is not available in EMEA) Display cover. Carbon-Fiber Hybrid		
Case Material	Bottom: Carbon-Fiber Hybrid		
	·	l .	Lenovo

Lenovo July 2019











ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel® Core™ m / i5 Processor, Intel Celeron® processor, or Intel Pentium® Silver processor								Dimensions Weight	<i>WxDxH</i> : 11.81" x 8.27" x 0.89"; 300mm x 210mm x 22.5mm From 3.4 lb (1.54kg)
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Controller	Processor Graphics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30	2			2.6 GHz	4MB	LPDDR3-1866	Intel HD Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1, HDMI1.4,
	i5-7Y54			1.2 GHz	3.2 GHz	4MB	LI DDI 13-1000	615	FOILS	Ethernet (RJ-45), headphone / microphone combo jack,
	Cel N4100		4	1.1 GHz	2.4 GHz	4MB	DDD 4 0 400	Intel UHD Graphics 600		microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Pen N5000	4		1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD Graphics 605	Control buttons	Power button, volume control button
Graphics	Intol UD C	rophic	0 61E I	ntal LIUD (Prophico 6	00 01	605 in process		Camera	One of the following, configurable by model:
Graphics	supports e	externa	al digital	monitor via	a HDMI or	USB 7	Type-C;	30Hz (HDMI)	Audio support	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 on Chip) platform 4GB or 8GB / 1866MHz LPDDR3 or 2400MHz DDR4 /								Keyboard UltraNav™	6-row, multimedia Fn keys Two buttons click pad below keyboard, multi-touch
Display MultiTouch	250 nits, 1 Capacitive	6:9 as	HD (1360 pect rati multi-tou	6x768), and io, 800:1 co	ti-glare, LE ontrast rat	io, 170	klight, IPS ° viewing ang	le	Security Security chip System Mgt (opt) Fingerprint reader	
Hinge Convertible mode Pen	Yoga hinge Laptop, ter Optional:	nt. sta	nd and t	ablet Pro, batter	ries requir	ed, on-	board garage		Battery Max battery life	Integrated Li-lon 42Wh battery MobileMark® 2014: 12 hrs * Battery life varies significantly with settings, usage, & other factors
Storage	eMMC flas								AC adapter	45W or 65W slim tip AC adapter or USB Type-C AC adapter
Optical	M.2 SSD / None	PCIe	NVMe,	PCIe 3.0 x	2, 16Gb/s	; 			Preload	Some: Windows® 10 Home 64 Some: Windows 10 Pro 64
Ethernet	Realtek R					Conne	ction		Limited warranty	One of the following, configurable by model:
WLAN	One of the following, configurable by model: • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card									1-year depot repair service3-year depot repair service
Bluetooth™							etooth 5.0, M. combo adapte		Mil-Spec test	MIL-STD-810G military testing
WWAN	None						· ·		Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant

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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.

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Additions in this update

► New product(s)

ThinkCentre M90n-1 Nano ThinkCentre M90n-1 Nano IOT

► New model(s)

None

▶ Others

Update EPEAT rating for all ThinkCentre products

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)			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 preinstalled through downgrade Preloaded applications (only some listed) Microsoft Office preloaded;			
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		rights in Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 Home 64-bit - 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>	(ĎVD±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			
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,										
	Some: 11ac wirel	ess, M.2 (letooth 4	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

Drococor	Intol® Coloron® Intol	Dontium®	or 9th / 9th Con	Intol Co	roTM i2 / i5 / i7 / i0) oorioo	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),	
Processor	Intel® Celeron®, Intel				1		VVLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1	
	Processor		Frequency Base/Max(GHz)	Cache	Memory Support (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	4 MB	DDR4-2400	UHD 630		optional Kensington® MicroSaver® cable; ● Boot sequence control	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Kensington lock also locks chassis) • Boot without keyboard and mouse	
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630		 Smart USB protection, allows keyboard/ Individual USB port disablement optional Chassis intrusion switch 	
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		, ,	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black	
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black	
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black	
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		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 Support VESA mount (100mm) 	
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630			
	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				oid models), DDR	4-2666*,		491 X 49 X 342 (mm) (Non-touch) 11.1 / 5.05 N/A	
	two 260-pin SO-DIMN							With Full Function Monitor stand (No camera):	
	* System clocks dowr	n for the p	rocessors with lo	wer mei	mory controller			19.3 X 9.9 X 14.8 to 19.1 (inch) (New Assists) 15.8 (7.18) Tilt: 45° back, -5° forward;	
Storage	Some: Hard Drive / S				200 rpm			491 X 252 X 377 to 486 (mm) (Non-touch) 15.8 / 7.18 Lift: 110mm; Swivel: +/-45°	
	Some: Solid State D							With UltraFlex III stand (No camera):	
	Some: M.2 SSD / PC * 128GB SSD M.2 (22	242) PCI	NVMe only sun	norts PC	le 3 0 x 2 16Gh	/c		Tilt: 70° book 5° forward:	
	Some: Intel Optane	Memory	(not support Ce	leron / P	entium Processo	r), M.2		19.3 X 9.9 X 10.4 (flighest) (Inch) (10uch) 17.3 / 7.85 Lift: 136mm;	
Optical	Some: DVD-ROM S	ata 1.5Gí	b/s Drivė, slim (9	.0mm)		,,		491 X 232 X 410 (filgriest) (fillif) (Noti-touch) 10.9 / 7.05 Swivel: +/-45°	
Madia raadar	Some: DVD Burner (Drive, s	lim (9.0mm)		Power supply	150 watts, autosensing, 90% PSU	
Media reader	Optional 3-in-1 media				D:		Limited warranty ³		
Graphics	Intel HD Graphics 6 ⁻ external monitor supp			main me	emory, DirectX° 1	2,	Limited warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available	
	Max resolution: 4096			(1080 (P	anel)@60Hz		Preload	Preloaded operating system	
Display	21.5" (546.1mm) Full	I HD 1080)p (1920x1080)	ΓFT colo	or, Borderless de	sign,	1 101044	Some: Windows 10 Pro 64-bit	
	MVA panel, widé view	ving angle	e (+/- 89°), LED b	acklight	, 250 nits, 16:9 as	spect ratio,		Some: Windows 10 Home 64-bit	
Multi-touch	1000:1 contrast ratio, Optional multi-touch,					hnology		Preloaded applications (only some listed)	
Camera	Optional 1080p came	ra. with d	ual microphone.	LED ind	icator, physical s	witch on/		Lenovo VantageMicrosoft Office preloaded; purchase a product key to activate	
	off, supports multi-de	gree rotat	ion (horizontal 0	° to 180°	$^{\circ}$, vertical -25 $^{\circ}$ to $^{\circ}$	25°)		Cyberlink PowerDVD (only for models with DVD / DVD±RW)	
Controls	Physical buttons on s	ide for mi	crophone mute a	ınd powe	er on/off			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	r On), or	ne ethernet (RJ-4	5).	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,	
·	one DisplayPort, one	optional	serial (9-pin).	•	•	•		TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified (for Full Function Monitor Stand only), TUV Low Blue Light certified,	
Side ports*	one USB 3.1 Gen2 (o	ne is Alw	ays On and fast	charge),	one USB 3.1 Typ	e-C Gen 1,		TUV Ultra Low Noise certified (on some models), RoHS-compliant	
	one optional card rea						MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,	
M.2 card slot	* Depending on many far Two M.2 Card slots (c	ctors, actua	al data transfer spe _AN. one for SSI	ed may b D/Optane	e lower than theore e)	lical speed	IVIIL-OI EO IESI	Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)	
Audio support	High Definition (HD)						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com	
Audio Support	Dolby [®] Audio™ Premi	,	allen ALO200 / I	wo iiileli	iai speakeis (200	^ 4),	, 10000001100	to our passon accessorios, produce go to interpretario interiorio volcom	
Nata The area (for	ations above may not be		i					Lenovo June 2019	













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	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 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		Wednamoar	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 ∉SΔTΔ 1 ¤	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	external monitor si	upport via	in processor, us DisplavPort™:	n processor, uses main memory, DirectX [®] 12, DisplayPort™:		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		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 Ťouch (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 Some: Windows® 7 Professional 32/64 preinstalled through downgrade • Microsoft Office preloaded;		
Controls	Physical buttons for and power on/off	or Microph	none mute, monit	or mode	switch, brightnes	s up/down,	Preioad			
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-pin)							- 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 opoou		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		00001740 /dis-	l la a .a al\		Certified; ULE Gold; ErP Lot 3; GREENGUARD® certified; RoHS-compliant		
	Some: 11ac wirel Wi-Fi + Blı		Jard, Qualcomm 1 combo adapte		QCA6174A (dua	i band),	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)		
	Some: 11ac wirel	ess, M.2 (1 combo adapte Card, Intel Dual E	Sand Wir	eless-AC 8265,		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 Gen Intel Core™ i3 / i5 / i7 / i9 series						Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2),		
	Processor	Processor Cores / Frequency Cache Memory Support II (Up to)		Integrated Graphics		Dolby® Audio™ Premium				
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),		
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	1	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, 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 G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610		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	Bluetooth™	Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2 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	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®		
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12.0 (Intel AMT 12.0);		
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	-	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi		
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	O a a consider carbains	adapter to enable vPro function through wireless connection)		
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified		
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Boot sequence control 		
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	_	Kensington lock also locks chassis) Boot sequence control Boot sequence control Boot sequence control		
	Core i3-9100 Core i3-9300	4/4	3.6G / 4.2G 3.7G / 4.3G	6 MB 8 MB	DDR4-2400 DDR4-2400	UHD 630	-	 Smart USB protection, allows keyboard/ Individual USB port disablement 		
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices Optional Chassis intrusion switch		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	-	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Wireless Reyboard (2.4-cm/2 via OSB receiver), black		
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	-	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black		
Mamani								Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black		
Memory	32GB max (16GB SC two 260-pin SO-DIMI * System clocks down fo	M sockets or the proce	, dual-channel c essors with lower m	apable emory co	ntroller		Mechanical	 Business black color Toolless back cover, stand, disk, memory removal Support VESA mount (100mm) 		
Storage	Some: Hard Drive / : HDDs (2nd F				200 rpm, support support (RAID pr			Dimensions (WxDxH) Max weight (lb / kg) Adjustments		
	available via	special bi	d model)		oapport (p.	0001 01,		Without stand (No camera):		
	Some: Solid State D	rive (SSD) / SATA 6.0Gb/s	3, 2.5"				21.3 X 1.8 X 13.7 (inch) (Touch) 14.0 / 6.34 N/A (Non-touch) 13.5 / 6.13		
	Some: M.2 SSD / PC * 128GB SSD M.2 (2242	CIE NVME 2) PCIe NV	e, PCIe 3.0 x 4^, Me only supports f	32Gb/s 2Cle 3.0 x	2 16Gh/s			With Full Function Monitor stand (No camera):		
	Some: Intel Optane	Memor Memo	(not support Ce	eleron / P	entium Processo	r), M.2		21.3 Y 9.9 Y 15.9 to 20.2 (inch) Tilt: 45° back -5° forward:		
Optical	Some: DVD-ROM S	ATA 1.5G	b/s Drive, slim (9).0mm)		,		542 X 252 X 405 to 514 (mm) (Non-touch) 18.2 / 8.26 Titl: 45 back, -5 followard, Lift: 110mm; Swivel: +/-45°		
Madia raadar	Some: DVD Burner Optional 3-in-1 media			S Drive, s	slim (9.0mm)			With UltraFlex III stand (No camera):		
Media reader Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,	-	21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Tilt: 70° back, -5° forward; 542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 Lift: 136mm; Swivel: +/-45°		
	external monitor supp Max resolution: 4096			v1080 (P	22201)@60Hz		Power supply	150 watts, autosensing, 90% PSU		
Display	23.8" (604.5mm) Ful WVA panel, wide view	II HD 108	Op (1920x1080)	TFT cold	or , Borderless des		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		
	1000:1 contrast ratio,	, anti-glare	e, support Low B					Preloaded operating system		
	monitor via DisplayPo							Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit		
Multi-touch Camera	Optional multi-touch, Some: 1080p camer	supports	10-point, AII (A	dvanced	In-cell louch) ted	chnology				
Camera	supports mul	ti-dearee	rotation (horizon	tal 0° to	180°, vertical -25	° to 25°)		Preloaded applications (only some listed)		
	Some: RGBIR came	era. 1080r	with dual micro	phone, r	physical switch on	n/off.		Lenovo VantageMicrosoft Office preloaded;purchase a product key to activate		
	supports mul	ti-dearee	rotation (horizon	tal 0° to	180°. vertical -25'	° to 25°)		Cyberlink PowerDVD (only for models with DVD / DVD±RW)		
Controls	Physical buttons on s	iio suppor side for mi	t, only available crophone mute a	via speci and powe	er on/off			 Cýberlink Power2GO (onlý for models with DVD±RW) LinkedIn 		
Chipset	Intel Q370 Chipset		<u></u>				Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,		
Rear ports*	Four USB 3.1 Gen1 (one supp	orts Smart Powe	er On), oi	ne ethernet (RJ-4	5),	1	TCO AIO Computer certified, GREENGUAŘD® certified,		
·	one DisplayPort in/ou	it combo	port, one optiona	ıl serial (9-pin)			TUV Eye comfort certified, TUV Low Blue Light certified,		
Side ports*	one USB 3.1 Gen2 (c						TUV Ultra Low Noise certified (on some models), RoHS-compliant			
	USB 3.1 Type-C Gen combo jack (3.5mm)		nionai card read	er, one h	ieaapnone / micro	ppnone	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)		
	* Depending on many fa	ctors, actu	al data transfer spe	ed may b	e lower than theoret	tical speed	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
M.2 card slot	Two M.2 Card slots (one for W	LAN, one for SS	D/Optáno	e)		70069901169	i or companible accessories, please go to mup://smartimu.ienovo.com		













ThinkCentre M600 Tiny Platform Specifications

Processor	Intel® Celeron® F	Processor	N3000 Series or	Intel Penti	ium® Processor	N3000 Series	Keyboard		B Keyboard (USB connector), Lenov	o logo		
	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Memory Types	Integrated Graphics	Mayraa	Some: Lenovo USB Fingerprint Keyboard (USB connector) Some: Ultraslim Plus Wireless Keyboard (2.4GHz via USB r		eceiver), black		
	Celeron N3050	2/2	1.6 / 2.16 GHz	2MB	DDR3L-1600	Intel HD	Mouse	Some: Enhanced Optical USB Mouse, black, Lenovo logo Some: Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black	iver) black			
	Celeron J3060	2/2	1.6 / 2.48 GHz	2MB	DDR3L-1600	Intel HD 400	 Mechanical	• Tiny (1L), black color, m	<u> </u>	ivory, black		
	Pentium N3700		1.6 / 2.4 GHz	2MB	DDR3L-1600	Intel HD	Mechanica	Tilly (TE), black color, ill				
	Pentium J3710		1.6 / 2.64 GHz	2MB	DDR3L-1600				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	^и , one opti	essor, uses main ional 3rd DP (not	memory, D support D	DirectX® 11.1, P to HDMI donç	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	ution: 3840 to 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 bra Optional system floor star	cket kit, supports VESA 75mm and for vertical orientation	100mm		
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 autosensing, 88% PSU (only for mo			
Storage	Some: 500GB NAND fl Some: Solid St Some: external	(5400 rpm lash mem ate 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	1 7 7				
Onboard SATA Media reader	Some: external Some:	ODD box	(for TIO) with DV (for TIO) with DV one connectors or	/D-ROM, 9 /D±RW, 9.	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 64-bit Some: Windows 10 Home 64-bit				
	one headphone	/ microph	one combo jack (stereo, 3.5	imm) .			Preloaded applications (only some listed)				
Rear ports*			0 (optional extern n some models),					 Desktop Power Manage 	er			
	one optional por	t (VGA, 3	rd DP, or serial or	n some mo	dels), one head	lphone		Lenovo Solution Center Lenovo Solution Center				
I/O box*	Optional externa	al I/O box,	extends two USE	3 2.0, two l	USB 3.0, and or	ne serial on		Lenovo REACHit Lenovo SHAREit				
	rear, two USB 2.	.0 on front	t, via USB (occup actual data transfe	y two spec	tific USB 3.0 of	M600 Tiny)		Lenovo Bluetooth Lock				
Audia augaart						·	-	 McAfee® LiveSafe™ (30-day trial) Microsoft Office preloaded; purchase a product key to activate 				
Audio support			o, Realtek ALC22		•	er (1 watt)						
WLAN ¹³			2 Card, Realtek F 4.0 combo adapt		= (dual band),			 PowerDVD Create (DVD±RW) Lenovo ThinkVantage Tools 				
			2 Card, Qualcom		QCA9377 (dua	l band),						
	Wi-Fi + I	Bluetooth	4.1 combo adapt	er, 1x1	,	,,	 Only for Window 10 Lenovo Companion (Win10) Cyberlink PowerDVD (DVD, DVD±RW) 					
	Some: 11ac wir	eless, M.2	2 Card, Qualcom	m Atheros	QCA6174 (dua	l band),						
			4.1 combo adapt 2 Card, Intel Dual		eless-AC 3165			Lenovo QuickOptimizer				
	Wi-Fi + I	Bluetooth	4.0 combo adapt	er, 1x1	·			- Only for Window 7				
	Some: 11ac wir	eless, M.2	2 Card, Intel Dual	Band Wire	eless-AC 8260,			Rescue and RecoveryPassword Manager				
Bluetooth™			 4.1 combo adapt .1 wireless, integr 		i-Fi + BT combo	adanter		 Tassword Manager ThinkVantage System I 	Jodate			
Ethernet Modem	One gigabit ethe	ernet port,	Realtek RTL811	1GN, Wak	e on LAN®	auaptei		 Lenovo Message Cente Adobe® Reader® 				
Manageability Security chip	None Trusted Platform	n Module,	TCG 1.2-complia	nt			Environment	ENERGY STAR® 6.0*, EP GREENGUARD®; RoHS-0	EAT™ Gold rating* (*not for non-OS compliant; Cisco EnergyWise compa	models); atible; ErP Lot 3		
Security features	Kensington® N • Padlock loop • Smart USB pr	dicroSaver otection, a locks all st	[®] cable)	Hard disBoot seBoot witIndividu	strator password sk password quence control thout keyboard al USB port dis s intrusion switch	and mouse ablement	Accessories	For compatible accessorie	es, please go to TC-AQP sheet			
Na faataataa fau u							•			anava Navanskav O		













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 lb (1.9 kg) 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 the state of t	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	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			
Front ports*	Two USB 3.0 (one is Always On and fast charge), one microphone (stereo, 3.5mm),					
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);			
WLAN¹³	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) Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter	Accessories	GREENGUARD®; RoHS-compliant; Cisco EnergyWise compatible; ErP Lot 3 For compatible accessories, please go to TC-AQP sheet			
Ethernet Modem Manageability	One gigabit ethernet port, Realtek RTL8111GN, Wake on LAN® None					
Security chip	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 		Langua November 2017			













ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series APU							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 Some: Windows 7 Professional 64 preinstalled through downgrade Preloaded applications (only some listed) - Windows 10 only preinstalled through downgrade 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 Lenovo System Update Factory Recovery User Guide Viewer Microsoft Office preloaded; purchase a product key to activate Adobe® Reader®			
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					
I/O box	None	15) 4 1	D !! ! A! O!	200 1/00		. (4.5)					
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	Realtek	earlier version (RTL8111HN, V	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	\PU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo Some: USB Optical Wheel Mouse, black, Lenovo logo		
	APU	Coros	Frequency	L2	Memory	Integrated	Mouse			
	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 ca	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 N					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) 3 Some: 1-year, depot service / service upgrades available		
Graphics	AMD Radeon™	Graphic	s in processor	uses ma	in memory Di	rectX® 12 two	Limited Warranty	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 I 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	e 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				icrophone (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 port	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 companie accessing, prease go to map.//smartima.ionove.com		
I/O box	None		, astaar aata tran		2ay 20 .0	a.r arooroaoa. opoou				
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	lapter, 1) mm Atholiapter, 1) k RTL883 lapter, 2) mm Atholiapter, 2)	c1 `eros QCA9377 c1 22BE (dual ba c2 eros QCA6174 c2	7 (dual band), nd), 4A (dual band),				
Bluetooth™	Some: Bluetooth * Win 10 RS3 and	n 4.2* wi	reless, integrate	ed in Wi-	Fi + BT combo					
Ethernet Modem	Gigabit ethernet, None									
Manageability Security chip	None Discrete TPM 2.0	•								
Security features	Security slot (in Kensington® M Smart USB pro mouse only, blo Power-on pass	icroSave otection, ocks all s	r® cable) allows keyboard	 Hai Boo Boo Indi 	ministrator pas rd disk passwo ot sequence co ot without keyb ividual 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 Pı	rocessor		Manageability	None				
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support	Integrated	Security chip	Firmware T	TPM 2.0, int	egrated in chips		
	Pentium Gold 5405U	2/4	2.3G	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security leatures	Security slot (in rear for optional Kensington® MicroSaver® cable) Boot sequence control Boot without keyboard and				
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		Chassis i	intrusion sw	itch	Individual USB	
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Power-on 				ection, allows keyboard/
Memory	16GB max, DDR4-26						-		 Administrator password Hard disk password mouse only, blocks all storage devices 			
Wichiory	* System automaticall	y clocks	down for the prod	cessors	with lower memo	ory controlle	Keyboard		Some: Lenovo Calliope Keyboard (USB connector), black			
Storage	Some: Hard Drive / S	SATA 6.00	ab/s, 2.5", 5400 i	rpm or 7			Mouse				connector), black	
	Some: Solid State Dr Some: M.2 SSD (228				QCh/c		Mechanical		black color;	metal case		
	Some: M.2 SSD (224							Optional Ope 2.5"		D/SSD two M 2	elote (one for WI AI	N, one for M.2 SSD)
Onboard SATA	One onboard SATA 6.	0Ĝb/s co	nnector					One 2.5	Day 101 11D	·	`	·
Graphics	Intel HD Graphics 61					12, one					ns (WxDxH)	Weight (Approx.)
	DisplayPort™, one HE Max resolution: 4096x							Tiny only			.20" X 1.36" .9mm X 34.5mm	2.91 lb (1.32 kg), vary by config
Monitor cable	Optional DP to VGA d	longle or	DP to HDMI 1.4	dongle	IDIVII) @ 24 HZ		\/F0.4			170111117 102		vary by coming
Chipset	Intel SoC (System or	n Chip) p	latform				VESA mount Floor Stand	None Optional sy	ystem floor s	stand for vertica	l orientation	
Front ports* (Std.)	One USB 3.1 Gen1, c				nicrophone (3.5m	nm),	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	ophone o wo USB 2	combo jack (3.5n d.0, one ethernet	nm) : (RJ-45)	, one DisplayPor	rt, one HDM	Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available			lle s available	
	* Depending on many fac	ctors, actua	al data transfer spe	ed may b	e lower than theore	etical speed	Preload	Preloaded operating system				
Audio support	Realtek ALC233VB / i	internal s	peaker (1.5 watt))				Some: Wi	indows® 10 indows 10 F	Pro 64-bit		
WLAN	Some: 11ac wireless,				(dual band),					ns (only some	listed)	
	Wi-Fi + Blueto Some: 11ac wireless		ombo adapter, 1		(dual band)			 Lenovo V 	Vantage	` •	,	
			ombo adapter, 2		(duai bariu),			Microsoft Office preloaded; purchase a product key to activate LinkedIn				
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirel	ess-AC 3165,							
	Wi-Fi + Blueto Some: 11ac wireless		ombo adapter, 1 d. Intel Dual Bar		ess-AC 8265		Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, RoHS-compliant,			CO. RoHS-compliant.	
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	2x2	•			WEEE, RE			g,, ,	
Bluetooth	Some: Bluetooth 4.2			-Fi + BT	combo adapter		MIL-SPEC test	Coming soon				
Ethernet Ethernet (Opt.)	Gigabit ethernet, Rea None	itek HTL	TITHN-CG				Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				d.lenovo.com
							•					l M 0010

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













ThinkCentre M710 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®. or 6/7th Gene	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)		Joseph Marianes	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	l to j z out u	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 6.0GI e (SSD) / PCIe N	b/s, 2.5" IVMe, P(Cle 3.0 x 4, 32Gb	/s		Slot 1: low-profile (length < 150mm, height Slot 2: low-profile (length < 150mm, height Slot 3: low-profile (length < 150mm, height	< 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 1.5Gl	(9.0 mm))	101.2		Slot 4: no slot, only bracket for optional por M.2 card slots: Two (one for WLAN, one for * Optional 2 front USB3.1 Type-C ports mo	r SSD/Optane)
Onboard SATA Media reader	Three onboard SA Optional 7-in-1 me	dia reade	r				Floor Stand	optional rear 2x USB2.0 / parallel / 2nd ser Optional system floor stand for vertical orie	ial occupies one expansion slot
Graphics	Intel HD Graphics one VGA, two Disp discrete graphics t Max resolution: 40 Some: NVIDIA Ge two Display	olayPort™, o support 96x2304 (e force® G /Port, 35 v	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 оттол одрргу	Some: 180 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 9	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	
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		rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel	
D +	bid), microphone (3.5mm), h	eadphone (3.5m	im)) 0			processor)	
Rear ports*	Two USB 3.1 Gen serial (9-pin), optic							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 ı	models			listed)	
Rear audio ports?	Line-in (3.5mm), li	ne-out (3.	5mm), microphoi	ne-in (3.5	ōmm)			 Microsoft Office preloaded; 	
ILLL 1004	None * Depending on many	v factors a	ctual data transfer s	sneed may	, he lower than theo	retical speed		purchase a product key to activate	
Audio support	High Definition (HI			· · ·	·		_	Only for Window 10Lenovo Companion	
WLAN ¹³	Some: 11ac wirele	, .				,	-	- Only for Window 7	
V V L/\(\)\	Wi-Fi + Blu	uetooth 4.	1 combo adapter	r, 1x1	,	, .		Lenovo Solution Center Lenovo Think Vantago Tools	
	Some: 11ac wirele	ess, M.2 (Card, Qualcomm	Atheros	QCA6174A (dua	l band),		Lenovo ThinkVantage ToolsCreate Recovery Media	
	Wi-Fi + Blu Some: 11ac wirele		1 combo adapter		ologo AC 2165			Adobe® Reader®	
			1 combo adapter		EIESS-AC 3105,			Cyberlink PowerDVD Create (DVD - DVV)	
	Some: 11ac wirele	ess, M.2 (Card, Intel Dual E	Sand Wir	eless-AC 8265,		Environment	(DVD±RW) ENERGY STAR® 6.1, EPEAT™ Gold rating	(North America)
Bluetooth™	WI-FI + BIL	uetooth 4. 4 1 wirele	1 combo adapter	r, 2x2 Wi-Fi	RT combo adante	r	LIMIOIMIEM	ErP Lot 3, GREENGUARD®, RoHS-compli	ant.
Ethernet	Some: Bluetooth 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111GN, Wake on LAN®							TUV low noise verified (on some models)	
Modem	None		<u> </u>				Accessories	For compatible accessories, please go to	nttp://www.lenovoquickpick.com
Manageability Security chip	None TPM (Trusted Platt * Downgrade to TF				G Win7 32 OS				
	. 3						1		













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 password Individual USB port disable Chassis intrusion switch 																												
	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 Calliope Wireless Keyboard (2.4GHz via USB receiv																												
	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; metal case • Toolless chassis open																													
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2400	HD 630																														
	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	Optional VESA mount 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							dows 10 Pro 64-bit																											
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 Some: Windows 10	Home 64-bit																											
	two optional ports (with DisplayPort A	rts (Port 1 for VGA / 3rd DP / HĎMI / serial / USB 3.1 Type-Ċ Ğen rt Alternate Mode), Port 2 for serial)						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		, .			•	,	1	Lenovo Solution CLenovo ThinkVanta																												
VVLAIN	Wi-Fi + Bluetooth 4.1 combo adapter, 1x1					Wi-Fi + Bluetooth 4.1 combo adapter, 1x1					Wi-Fi + Bluetooth 4.1 combo adapter, 1x1					Wi-Fi + Bluetooth 4.1 combo adapter, 1x1					Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), 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, 1x1				-Fi + Bluetooth 4.1 combo adapter, 1x1			uetooth 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, GREENGUARD®, RoHS-compliant, TUV low noise verified (on some models)		•																											
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None						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)																												
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	For compatible accessories, please go to http://www.lenovoquickpick.com																												

See footnotes for more detailed information













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	Three onboard SA Optional 7-in-1 me				. ,			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							optional rear 2x USB2.0 / parallel occupies one expansion slot
	one VGA, two Disp discrete graphics to Max resolution: 409 Some: NVIDIA Ge	o support 96x2304 (more displays; (DP)@60Hz; 204	8x1536	(VGA)@50Hz		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	an O (anhy availahl	a via aposial		(not available with 7th Gen Intel - Only for Window 10 processor) • Lenovo Companion
	bid), microphone (3	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	o USB 3.1 Gen1, two USB 2.0, optional two USB 2.0, serial (9-pin), optional 2n rial (9-pin), optional parallel (25-pin), ethernet (RJ-45), one VGA, two DisplayPo o PS/2 ports (keyboard/mouse); Iditional VGA, DisplayPort, or HDMI on optional graphics on some models				DisplayPort,		 Lenovo ThinkVantage Tools Create Recovery Media Adobe® Reader®
Rear audio ports* IEEE 1394*	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
	Some: 11ac wirele	ess, M.2 (1 combo adapter Card, Qualcomm 1 combo adapter	Atheros	QCA6174A (dual	band),	Accessories	roi companible accessories, please go to mtp.//www.ieriovoquickpick.com
	Some: 11ac wirele Wi-Fi + Blu	Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.1 combo adapter, 1x1						
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.1 combo adapter, 2x2							
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111GN, Wake on LAN® None							
							I	













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron®, Int			eration I	1		Security features	Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		 Padlock loop Hard disk pa 	assword		
	Celeron G3900	2/2	2.8G	2 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard 			
	Celeron G3930	2/2	2.9G	3 MB	DDR4-2133	HD 610		Optional smart cable clip to physically Individual U	SB port disablement		
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		lock both keyboard and mouse Optional cha	assis intrusion switch		
	Pentium G4500	2/2	3.5G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black	k		
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	l., '	Some: Lenovo Traditional Keyboard (USB connector), bla	ack		
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black	المستعددة المالم		
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		Some: Lenovo Fingerprint Mouse (USB connector), Wind	Jows Hello Support, blac		
	Core i5-6400	4/4	2.7G / 3.3G	6 MB	DDR4-2133	HD 530	Mechanical	SFF (7.4L), black color, metal case (Market 10.2 Market 1	70		
	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 27 Approx. 9.37 lb (4.25 kg), weight may vary by configurate 			
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		Bay 1: Slim external ODD bay	lion		
	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/S	SD (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), PCIe Slot 2: low-profile (length < 152mm, height < 64mm), PCIe			
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		M.2 card slots: one for SSD	6 3.0 X I		
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		*Optional rear 2x USB2.0 / parallel occupies one expansion	on 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	bĺe	, ,		,	,	Packaging	 (WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500 Cross weight (approx.) 14.22 lb (6.45 kg) 	mm		
	*System automatic						Power supply	Some: 180 watts, autosensing, 85% PSU			
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	/ SATA 6 Drive (S	.0Gb/s, 2.5" or 3. SD) / SATA 6.0Gl	.5", 5400 b/s, 2.5"	or 7200 rpm	/s	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrad Some: 1-year or 3-year, limited onsite service / service			
Optical	Some: DVD-ROM	SAIA 1.	oGb/s Drive, slim	(9.0mm)	3	Preload	Preloaded operating system			
Onboard SATA	Some: DVD Burne Two onboard SATA			b/s Drive	e, slim (9.0mm)			Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
Media reader	Optional 7-in-1 me							Some: Windows 7 Professional 32/64 preinstalled through do	ah downarade riahts		
Graphics	Intel HD Graphics			essor us	ses main memory	DirectX® 12	1	in Windows 10 Pro 64-bit(not available with 7th G	ien Intel processor)		
атартноо	one VGA, one Disp	layPort™	, supports 2 inde	pendent	displays, works a	long with		Preloaded applications (only some listed)	, ,		
	discrete graphics to	o support	more displays;			· ·		Microsoft Office preloaded; numbers a preduct key to activate.			
	Max resolution: 40							purchase a product key to activateCyberlink PowerDVD (DVD, DVD±RW)			
	Some: NVIDIA Ge two Display			2, 2GB, I	Cie 2.0 x8 adapti	er,		Cyberlink PowerDVD Create (DVD±RW)			
)x2160 (DisplayP	ort)@60	Hz:			- Only for Window 10			
Monitor cable	Optional DP to VG					HDMI 1.4		Lenovo Companion Cally for Window 7			
Chipset	Intel B250 Chipse	t					1	Only for Window 7Lenovo Solution Center			
Front ports*	Two USB 3.1 Gen1	microni	none (3.5mm), or	ne headr	phone / microphon	e combo jack		Lenovo System Update			
rioni porto	(3.5mm)	i, iiiloropi	10110 (0.011111), 01	ic ricadp	mone / morephen	ie dombo jadi		Create Récovery Media			
Rear ports*	Two USB 3.1 Gen1	, two US	B 2.0, optional tw	o USB 2	2.0, serial (9-pin),	optional 2nd		Adobe® Reader®			
	serial (9-pin), optio optional external U	SB to PS	5/2 ports cable (fo	or PS/2 k	(eyboard / mouse	e DisplayPort. ;	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North Americ RoHS-compliant, WEEE	ca), ErP Lot 3,		
Daan avalla saast s	additional DisplayF		tional graphics o	n some	models		Accessories	For compatible accessories, please go to http://www.lene	ovoguicknick.com		
Rear audio ports* IEEE 1394*	Line-out jack (3.5m	ım)					710000001100	To companie accessories, produce go to nitp://www.ici i	ovoquiokpiok.com		
IEEE 1394*	None * Depending on many	factors a	otual data transfor s	spood ma	y bo lower than thee	ratical speed					
Audio support	High Definition (HD				•	<u> </u>	-				
WLAN ¹³		, Audio,	I IGAIIGN ALUZ33	, miema	u speaket (1.5 Wat	,	-				
	None None										
Rhietooth™		Paltak R	ΓL8111HN, Wake	on LAN	J ®						
Bluetooth™ Ethernet	Gigabit ethernet. H	icalick i i					1				
	None	icanek i i	0 ,								
Ethernet		leaner i					_				













ThinkCentre M715 SFF Platform Specifications

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Processor	AMD A6 / A8 / A10 / A1			/ 5 / 7 series	·	Security features	Security slot (in rear for optional Power-on password Administrator password Administrator password				
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics		 Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ Administrator password Hard disk password Boot sequence control 				
	Ryzen 3 PRO 1200	4 / 4	3.1 / 3.4	2MB	None		mouse only, blocks all storage devices • Boot sequence control • Boot sequence control • Boot without keyboard and mouse				
	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 Some: Lenovo Calliope Mouse (USB connector), black				
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Mouse	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 down	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				
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	re (SSD) / Ś/	ATA 6.0Gb/s, 2.	5" ່	'		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*				
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), SA	ATA 1.5Gb/s Dr		mm)		Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1* Slot 4: no slot, only bracket for optional port extension*				
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader				_	M.2 card slots: two (one for WLAN, one for SSD) * Optional front USB3.1 Type-C x2 module occupies PCIe x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot				
Graphics	AMD Radeon™ Graph memory, DirectX® 12, c	ics in proce	ssor (not for A DisplayPort™	MD Ryzen p (Onboard VC	rocessor), uses main AA and DP ports	Floor Stand	Optional system floor stand for vertical orientation				
	are invalid on the mode displays, works along v Max resolution: 4096x2 Some: NVIDIA Gefore	els with AMD vith AMD dis 160 (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 link), DP	to dual DP, c	or DP to HDMI 1.4	Preload	Preloaded operating system				
Chipset	AMD B350 Chipset						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)				
Front ports*	Two USB 3.1 Gen2, two available via special bid	o USB 3.1 G d), microphor	en1, optional tv ne (3.5mm), he	vo USB 3.1 T adphone (3.5	Type-C Gen 2 (only 5mm)		Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit				
Rear ports*	Two USB 3.1 Gen1, two	USB 2.0, o	ptional two US	B 2.0, serial	(9-pin), optional		Preloaded applications (only some listed)				
	2nd serial (9-pin), optio DisplayPort (not availab	nai parailei (de on model	25-pin), etnern s with AMD Rv	et (HJ-45), 0 zen processo	ne vGA and two or), two PS/2 ports		Microsoft Office preloaded;				
	(keyboard / mouse);	no on model	o with the ray	2011 91000000	51), two 1 6/2 ports		purchase a product key to activate - Only for Window 10				
	àdditional DisplayPort	on optional g	raphics on som	e models			Lenovo Companion				
Rear audio ports	Line-in (3.5mm), line-or	ut (3.5mm), r	nicrophone-in (3.5mm)			- Only for Window 7				
IEEE 1394*	None * Depending on many factor	ors. actual data	a transfer speed i	nav be 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 + Bluetoo Some: 11ac wireless, Wi-Fi + Bluetoo	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				
	Some: 11ac wireless, Wi-Fi + Bluetoc	M.2 Card, Quality of the 4.1 comb	ualcomm Ather o adapter, 1x1		, , , , , ,	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 o Gigabit ethernet, Realte None	r 4.1 wireles	s, integrated in		combo adapter						
Manageability Security chip	DASH TPM (Trusted Platform * Downgrade to TPM1.2										













ThinkCentre M715 Tiny Platform Specifications

Processor	AMD A6, A10, or	A12 ser	ries APUs				Keyboard	Some: Fullsize USB Keyboard (USB connector), Lenovo logo
	APU	Cores	Frequency Base/Max	L2 Cache	Memory Types	Integrated Graphics	Mouse	Some: Lenovo New Slim USB Keyboard (USB connector), black, Lenovo logo Some: USB Optical Wheel Mouse, black, Lenovo logo
	PRO A6-9500E	2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5 Series	Mechanical	Tiny (1L), black color; metal case
	PRO A10-9700E	4	3.0 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7 Series		M715 Tiny only: 7.05" W X 7.20" D X 1.36" H
	PRO A12-9800E	4	3.1 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series		179mm W X 182.9mm D X 34.5mm H
	PRO A6-8570E	2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5 Series		2.9 lb (1.3 kg), weight may vary by configuration
	PRO A10-8770E	4	2.8 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7 Series		With VESA mount & ODD box:
	PRO A12-8870E	4	2.9 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series		7.42" W X 7.30" D X 2.48" H 188.4mm W X 185.38mm D X 63mm H
Memory	32GB max, DDR- *16GB single SO							4.12 lb (1.87 kg), weight may vary by configuration With VESA mount & I/O box:
Disk	Some: SATA 6.0 Some: Solid Sta	te Drive	(SSD) / SATA 6	.0Gb/s,	2.5"	D/A/a intenfere		7.42" W X 7.30" D X 2.62" H 188.4mm W X 185.38mm D X 66.6mm H 3.53 lb (1.6 kg), weight may vary by configuration
Optical	Some: M.2 Solid Some: DVD-ROI Some: DVD±RW	M, 9.0mı	m high, viá USE	3 externa	al ODD box	IVMe interface	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation
Onboard SATA Media reader	One SATA cable None	(1-drop 1	to device), one	SATA 6.0	OGb/s connect		Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models) 90 watts AC/DC adapter, autosensing, 88% PSU (only for models with I/O box)
Graphics		e option	al port (HDMI, \	/GA, or 3	3rd DP), suppo	rectX [®] 12, two orts 3 independent is when using HDMI	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
	port or DP to DVI Max resolution: 4	/HDMI d 096x216	dongles); 60 (DP)@60Hz;	4096x2	. ,	· ·	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit - Windows 10 only
DP cable	Optional DP to V	920x120 GA, DP	00 (VGA)@60H to DVI-D (single	z e link), or	DP to HDMI 1	1.4 dongle		Some: Windows® 7 Professional 64 • Lenovo Companion
Chipset	AMD B300 Chip	set						rights in Windows 10 Pro 64-bit purchase a product key to activate
Front ports*						one (stereo, 3.5mm),		- Windows 7 only
Rear ports*	One USB 3.0 and one specific USB	three U	JSB 2.0 (optional some models).	ack (stereo, 3.5mm) onal external optical box or I/O box occupies), ethernet (RJ-45), two DisplayPort,			 Lenovo Solution Center ThinkVantage System Update Create Recovery Media 	
I/O box*	one optional port Optional external serial, and two P	(VGA, 3 I/O box S/2, via	Brd DP, HDMI, o , extends four U USB port (occu	r serial c ISB 2.0 (py one s	on some mode (two on front a pecific USB 2.	ls), one headphone nd two on rear), one .0 of M715q Tiny) han theoretical speed		Create Recovery Media Lenovo ThinkVantage Tools CyberlinkPowerDVD Create(DVD±RW Microsoft Office preloaded; purchase a product key to activate
Audio support	High Definition (F	ID) Audi	io, Realtek ALC	233-CG	/ internal spea	ker (1.5 watt)		 Adobe® Reader®
WLAN ¹³		luetooth	4.0 combo ada	apter, 1x	1 `	,.	Environment	ENERGY STAR® 6.1*, EPEAT™ Gold rating* (*Not for non-OS models); ErP Lot 3; GREENGUARD®; RoHS-compliant
	Wi-Fi + B Some: 11ac wire Wi-Fi + B	Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®						For compatible accessories, please go to http://www.lenovoquickpick.com
Bluetooth™ Ethernet Modem								
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0	, TCG C	Certified					
Security features	Kensington® Mi Padlock loop Smart USB pro	croSave tection, ocks all s	er® cable)	 Hai Bood Indi 	ministrator pas rd disk passwo ot sequence co ot without keyb ividual USB po assis intrusion	ord ontrol ooard and mouse ort disablement		













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	Cores / Threads						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 200GE Athlon PRO 200GE	2/4	3.2 GHz 3.2 GHz	1 MB / 4MB	DDR4-2933 DDR4-2933	Radeon Vega 3 Radeon Vega 3	-	 mouse only, blocks all storage devices Power-on password Individual USB port disablement Chassis intrusion switch 			
	PRO A6-8570E	2/4	3.0 / 3.4 GHz	1 MB	DDR4-2933	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 Some: Lenovo Calliope Mouse (USB connector), black			
	PRO A10-9700E	4/4	3.0 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7	, iviouse	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, bla			
	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			
	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 M715 Gen2 Tiny only:			
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB / 4MB	DDR4-2933	Radeon RX Vega 11]	7.05" W X 7.20" D X 1.36" H			
Memory	32GB max, DDR4 2 * System automatic							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	SD) / SATA 6 Me, PCIe 3.0 CIe NVMe or	.0Gb/s, 2.5 x 4*, 32Gb ly supports	/s /S PCIe 3.0 x	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		Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)			
Onboard SATA	One SATA cable (1-					-	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available			
Graphics Monitor cable	AMD Radeon™ Gra DisplayPort™, one of displays (supports r port or DP to DVI/HI Max resolution: 409 192 Optional DP to VGA	ptional naximun DMI don 6x2160 0x1200	port (HDMI, V n of 2 concur ngles, and Ath (DP)@60Hz; (VGA)@60Hz	/GA, or 3rd rent HDMI/I nlon / Athlor 4096x2160 z	DP), suppo DVI displays PRO only s (HDMI)@3	rts 3 independent 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 purchase a product key to activate			
Chipset	AMD B300 Chipset	:		-		-	1	 Cyberlink PowerDVD (only for mode) 			
. ,) Two USB 3.1 Gen1 3.5mm), one headp	ĥone / n	nicrophone co	ombo jack (stéreo, 3.5m	nm)	-	with DVD / DVD±RW) • Cyberlink Power2GO (only for mode with DVD±RW)			
Hear ports" (Std.) One USB 3.1 Gen1 one headphoneone	and thre	ee USB 2.0, e	etnernet (H.	J-45), two D	ispiayPort,		LinkedInWindows 7 only			
Rear ports* (Opt.) One optional port (\ * Depending on many ** Not support VGA, 3r	factors, a	ctual data trans	sfer speed ma	ay be lower th	an theoretical speed		 Lenovo Solution Center ThinkVantage System Update Create Recovery Media 			
Audio support	High Definition (HD)	Audio,	Realtek ALC	233-VB2 / ir	nternal spea	ker (1.5 watt)]	 Microsoft Office preloaded; purchase a product key to activate 			
WLAN		tooth 4.	2* combo ad	apter, 1x1	`	,,	Environment	Adobe® Reader® ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*Not for non-OS models);			
		tooth 4.	2* combo ad	apter, 1x1		, ,,		ErP Lot 3; ; RoHS-compliant			
	Some: 11ac wireles Wi-Fi + Blue	tooth 4.	2* combo ad	apter, 2x2	`	,,	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock			
Bluetooth	Wi-Fi + Blue Some: Bluetooth 4.	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 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					Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Ethernet	Gigabit ethernet, Re	pabit ethernet, Realtek RTL8111EPV, Wake on LAN®				PP0110 D1 T.1					
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, TCG Certified										













ThinkCentre M715 Tiny Thin Client Platform Specifications

Processor	AMD A6, A10, or	A12 sei	ies APUs				Keyboard	byboard Some: Fullsize USB Keyboard (USB connector), Lenovo logo			
	APU	Cores	Frequency	L2	Memory	Integrated	Mouse		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	Floor Stand		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 interi	ace	Preload	Preload	led operating system		
Onboard SATA	One SATA cable ((1-drop	o device), one	SATA 6.0	Gb/s connect	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 c	longles);		, ,	J	Accessories	For com	patible accessories, please go to http://www.lenovoquickpick.com		
	Max resolution: 4				160 (HDMI)@:	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 (stered	, 3.5mm)						
Rear ports*	one specific USB	inree t	some models)	ai extern ethernet	ai opticai box ((R.I-45) two [or I/O box occupies					
	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	l may be lower t	han theoretical speed					
	None	ID\	a. Daaltal: ALO	000.00	/ :	lean (1 Fatt)					
Audio support	High Definition (H		*			,					
WLAN ¹³	Some: 11ac wire Wi-Fi + B		4.0 combo ada			na),					
Bluetooth™	Some: Bluetooth	4.0 or 4	I.1 wireless, inte	grated i	n Wi-Fi + BT c	combo adapter					
Ethernet Modem	Gigabit ethernet,	Realtek	RTL8111EPV,	Wake or	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					
		tootion	allowe keybeer								
	Power-on passy		.3		assis intrusion						
	 Padlock loop Smart USB promouse only, blo 	tection, ocks all s	allows keyboard	d/	vidual USB po	oard and mouse ort disablement					













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

Processor	AMD Athlon, A6, A10	D. 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 1 MB / 4MB	Memory Sup- port (Up to) DDR4-2933	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 • Toolless chassis open (need optional toolless chassis screw)
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		Optional dust filter
Memory	8GB max, DDR4 266 * System automatica							M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H
Disk Optical	Some: 32GB M.2 Some: 128GB M.2 Some	olid State Solid Sta	e Drive (SSD) te Drive (SSD	/ SATA inte D) / PCIe N	erface VMe, PCIe 3	.0 x 2	VESA mount Floor Stand 2.91 lb (1.32 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation	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	Irop to de	evice), one S	ATA 6.0Gb/s	s connector	on planar		
Graphics	AMD Radeon™ Gra						Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
	DisplayPort™, one or displays (supports m						,	1-year or 3-year, limited onsite service / service upgrades available
	port or DP to DVI/HD Max resolution: 4096	MI dong x2160 ([les, and Athle	on / Athlon	PRO onlý su	pport 2 displays);	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	Optional DP to VGA			dongle, or D	P to HDMI 1	I.4 dongle		, , , , ,
Chipset	AMD B300 Chipset						Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant
	Two USB 3.1 Gen1 (3.5mm), one headph	ione / mi	crophone cor	nbo jack (st	téreo, 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 one headphoneone	and three	e USB 2.0, et	nernet (RJ-	45), two Disp	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	actors, 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	tooth 4.2 s, M.2 Ca tooth 4.2 s, M.2 Ca tooth 4.2 s, M.2 Ca tooth 4.2 2* wireles	* combo ada ard, Qualcom * combo ada ard, Realtek I * combo ada ard, Qualcom * combo ada ss, integrated	pter, 1x1 nm Atheros pter, 1x1 RTL8822BE pter, 2x2 nm Atheros pter, 2x2 in Wi-Fi + I	QCA9377 (c E (dual band QCA6174A BT combo ac	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, TO							
Jecumy leatures	 Security slot (in reakensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on passworn 	Saver [®] ·ca tion, allow all stora	able) ws keyboard/	Hard disBoot seBoot witIndividu	trator passw sk password quence cont hout keyboa al USB port intrusion sw	rol Ird and mouse disablement		













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*			
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	M.2 card slots: two (one for WLAN, one for SSD) * Optional front USB3.1 Type-C x2 module occupies PCIe x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot			
	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		,	1101044	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 SFF Platform Specifications

Processor	Intel® Celeron®, Intel I	Pentium®	or 8th Generation	on Intel C	Core™ i3 / i5 / i7 P	rocessor		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
1 10063301		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	Discourse at la TM	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 6/6	3.0G / 4.1G 3.1G / 4.3G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630	Security features	Security slot (in rear for optional Power-on password
	Core i5-8600 Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i3-9100	4/4	3.6G / 4.2G	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 i3-9300	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 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	17 1	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 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		UHD 630		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
Memory	64GB max, UDIMM, I			DIMM so			Mouse	Some: Lenovo Calliope Mouse (USB connector), black
Memory	dual-channel capable		50, IOUI 200-PIII	DIIVIIVI 50	ckets, non-Ecc,			Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	* System automatical		down for the prod	cessors v	vith lower memor	y controlle	r	Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
Storage	Some: Hard Drive / Some: Solid State Dri Some: M.2 Solid State * M.2 SSD (2242) PC	rive (SSD te Drive () / SATA 6.0Gb/s SSD) / PCIe NVI	i, 2.5" Me, PCle	3.0 x 4*, 32Gb/s	i	Mechanical	 SFF (8.4L), black color; metal case (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
Optical	Some: Intel Optane ^{TN} Some: DVD-ROM SA	Memory	(not support Ce	leron / Po	entium Processor	r), M.2		Toolless cover, disk, optical, and extension card removal Optional dust filter Toolless cover, disk, optical, and extension card removal Optional dust filter
·	Some: DVD Burner (DVD±RW	/), SATA 1.5Gb/s		lim (9.0mm)			Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD
Onboard SATA	Three onboard SATA		connectors					Bay 3: 2.5", internal, HDD/SSD (optional bay)
Media reader	Optional 7-in-1 media				5		_	Slot 1: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x16
Graphics	one VGA, two Display							Slot 2: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1 Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1
	discrete graphics to s			nuent uis	spiays, works alor	ig with		Slot 4: no slot, only bracket for optional port extension
	Max resolution: 4096>	<2304 (DF	P)@60Hz; 2048x				F. O	M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	Some: NVIDIA Gefor			2GB, PCI	e 2.0 x16 adapte	r,	Floor Stand	Optional system floor stand for vertical orientation
	two DisplayPo Max resolution	าเ, งอ wat ว: 3840x2	ts; 160 (DisplayPort)@60Hz	:		Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor cable	Optional DP to VGA d	longle, DF	P to DVI-D dongl	e, DP to	dual DP dongle (for Collage		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)
	Display with intel integ							
Chipset	Intel B360 Chipset						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 1x microphone (3.5m)						Preload	Preloaded operating system
Front ports* (Ont	Optional: 1x media re		aupitorie / micro	priorie de	inibo jauk (3.5iiiii	'/		Some: Windows® 10 Pro 64-bit
Rear ports* (Std.)	4x USB 2.0, 1x serial	(9-pin), 1	x ethernet (RJ-4	5), 1x VG	A, 2x DisplayPor	t,		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
	1x line-out (3.5mm)							Lenovo Vantage
Hear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCI2 x1**, 2x U	SB 3.1 Ty	ype-C Gen2 via F	Cle x4**		Microsoft Office preloaded:
	(special bid only), 1x 2 pin), 2x PS/2 ports (ke	∠⊓u se⊓al evboard/n	າ (ອ-piri), 4x seria nouse), addition:	u (9-pin) al R.I-45	via POIE XI, IX p and video ports a	arallel (25- Ivailable on		purchase a product key to activate
	optional graphics or e	thernet ca	ard	21 1 10 40	and video porto d	wanabio oi	•	Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2CO (only for models with DVD / DVD±RW)
	* Depending on many fac	ctors, actua	al data transfer spe			ical speed		Cyberlink Power2GO (only for models with DVD±RW) LinkedIn
	** Choose either 2x USB						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
Audio support	High Definition (HD) A					tt)		TUV low noise verified (coming soon, on some models), RoHS-compliant
WLAN	Some: 11ac wireless Wi-Fi + Blueto		d, Realtek RTL8 ombo adapter, 1		dual band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M720 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®,	or 8th Generation	on Intel	Core™ i3 / i5 / i7	Processor	Manageability	None				
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security chip	Discrete TPM 2.0, TC	CG Certified			
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	Security leatures	 Security slot (in rear for optional Kensington® MicroSaver® cable) Chassis intrusion switch Power-on password Administrator password Hard disk password Boot sequence control Boot without keyboard an Individual USB port disab Smart USB protection, all mouse only, blocks all sto 		control		
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400 DDR4-2400	UHD 610				port disablement		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630				ection, allows keyboard/		
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630				cks all storage devices		
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630						
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Callio				
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), b				
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			JOB 10001V01), black	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630					lows Hello support, black	
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630					B receiver), black	
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	Mechanical	Tiny (1L), black color	; metal case			
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630		Toolless chassis opToolless HDD, SSD	en (need optiona	al toolless chassis s	crew)	
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		 Optional dust filter 	, memory remova	dI .		
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		one 2.5" bay for HDD	/SSD, one PCIe	3.0 x8 slot (low-prof	ile), two M.2 slots (one	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		for WLAN, one for M.	2 SSD), 2.5" HDI	D/SSD and PCle ca	rd are mutually exclusive	
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630			Dimension	ns (WxDxH)	Weight (Approx.)	
Memory	32GB max, DDR4-26	66* two 2	260-nin SO-DIMI	/ socke	ts non-FCC		1	Tiny only		.20" X 1.36"	2.91 lb (1.32 kg),	
WEITIOT y	dual-channel capable		.00-piii 30-Diivii	VI SOUNC	is, 11011-LOO,			l'iniy onny		.9mm X 34.5mm	vary by config	
	* System automaticall		down for the prod	cessors	with lower memo	ry controller	r	With VESA mount &	7.42" X 7	.30" X 2.48"	3.66 lb (1.66 kg),	
Storage	Some: Hard Drive / S	SATA 6.00	ab/s, 2.5", 5400 r	pm or 7	200 rpm		1	ODD box		5.38mm X 63mm	vary by config	
Ü	Some: Solid State Dr	ive (SSD) / SATA 6.0Gb/s	, 2.5"	•			Optional VESA mount bracket kit, supports VESA 75mm and 100mm				
	Some: M.2 SSD / PC				210 2 0 v 0 160h	10	VESA mount Floor Stand	"" Outland a stand floor stand for continuity and automateur				
	* 128GB SSD M.2 (22 Some: Intel Optane™	1 Memory	(not support Ce	ports Pt Ieron / F	Pentium Processo	or) M 2		or Stariu ,		200/ DCH		
Optical	Some: DVD-ROM, sli	im (9.0mr	n), via ÚSB exte	rnal OD	D box	*	Power supply	Some: 65 watts AC/L	DC adapter, autos	sensing, 88% PSU		
	Some: DVD Burner ($DVD \pm RW$), slim (9.0mm),	via USE	B external ODD b	ox		Some: 135 watts AC				
Onboard SATA	One onboard SATA 6.						Limited warranty	Some: 1-year or 3-y	• • • • • • • • • • • • • • • • • • • •			
Graphics	Intel HD Graphics 61						Limited Warranty	Some: 1-year or 3-y				
	DisplayPort™, one HE or USB 3.1 Type-C Ge						Preload	Some: Windows® 10 Pro 64-bit				
	Max resolution: 4096x					t diopidyo,						
	4096×	(2160 (on	board HDMI)@2	4Hz; 20	48x1536 (VGA)@	҈950Hz		Some: Windows 10	Home 64-bit	!! - 4!\		
Monitor cable	Optional DP to VGA d					(for Collage		Preloaded application	ons (only some	listea)		
	Display with intel integ	grated gra	ipnics), or DP to	HDMI 1	.4 dongle			Lenovo VantageMicrosoft Office preloaded;				
Chipset	Intel B360 Chipset							purchase a produc				
Front ports* (Std.)	one USB 3.1 Gen1 (A							 Cyberlink PowerDV 			RW)	
Poor porte* (Std.)	one microphone (3.5n 2x USB 3.1 Gen2, 2x	nm), one	headphone / mid	crophon	e combo jack (3.5	omm)		Cyberlink Power2GLinkedIn	iO (only for mode	els with DVD±RW)		
Rear ports* (Opt.)) Two optional ports (m	utually ex	clusive with PCI	e card):	Port 1 for VGA /	2nd DP /	Carrier and					
(2nd HDMI / serial / US	SB 3.1 Ty _l	be-C Gen 1 with	DP fund	ction); Port 2 for s	serial;	Environment	ENERGY STAR® 7.0, EPEAT™ Gold rating (North America), ErP Lot 3, TCO, TUV ultra low noise verified (coming soon, on some models), RoHS-compliant				
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	-pin) via	MIL-SPEC test					
	PCIe x1 * Depending on many fac	etore actua	al data transfer sne	ad may h	e lower than theore	tical speed	IVIIL-31 LO lest	Low Temperature. Tel	mperature Shock	. Humidity. Sand an	d Dust, Vibration, Shock,	
Audio support	Realtek ALC233VB2		<u> </u>			nicai speca	+	Fungus, Solar Radiat	tion)		, , ,	
WLAN	Some: 11ac wireless		· •	`			Accessories	For compatible acces	ssories, please go	to http://smartfine	d.lenovo.com	
VVLAIN	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 1	0210⊑ (x1	duai band),							
	Some: 11ac wireless	, M.2 Car	d, Realtek RTL8	822BE ((dual band),							
			ombo adapter, 2		40.0405							
	Some: 11ac wireless		d, Intel Dual Bar ombo adapter, 1		ess-AC 3165,							
	Some: 11ac wireless				ess-AC 8265.							
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2								
Bluetooth	Some: Bluetooth 4.2	wireless,	integrated in Wi	-Fi + BT	combo adapter	I ANI®						
Ethernet Ethernet (Opt.)	Gigabit ethernet, Intel Some: Intel Ethernet											
Euromot (Opt.)	Como. Intol Etholilet	SOLVOL AL	ιαριοι 1000-14, <u>ξ</u>	igabit 6		,, 1 OIO AT						













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th Generation	on Intel (Core™ i3 / i5 / i7 F	Procesor	WLAN ¹³	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),			
1 10003301		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	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2			
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	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	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®			
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCle x Some: Bitland BN8E88*, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)			
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		* Choose either I350-T4 or BN8E88			
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability	None			
	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			
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Kensington [®] MicroSaver [®] cable) • Administrator password			
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Padlock loop Hard disk password Optional calls look to physically look a Past assurance control.			
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Optional cable lock to physically lock Boot sequence control Boot without keyboard and mouse 			
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement 			
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)			
	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 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, UDIMM, I		66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
	dual-channel capable		down for the pro-		with lawar mana	v., oontrollo	Mouse	ne: Lenovo Calliope Mouse (USB connector), black			
<u></u>	* System automatically clocks down for the processors with lower memory controller							Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
Storage	Some: Hard Drive / S Some: Solid State Drive	SAIA 6.00	3b/s, 2.5" or 3.5"	, 5400 rp	om or 7200 rpm			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
	Some: M.2 Solid Sta				e 3.0 x 4*. 32Gb/s	3	Mechanical	Tower (15L), black color, metal case			
	* 128GB SSD M.2 (22	242) PCIè	NVMe only sup	ports PC	Cle 3.0 x 2. 16Gb	/s	IVIECTIATIICAI	• (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm			
Ontinal	Some: Intel Optane	Memory	(not support Ce	leron / F	entium Processo	r), M.2		Approx. 15.21 lb (6.9 kg), weight may vary by configuration			
Optical	Some: DVD-ROM Some: DVD Burner (lim (9 0mm)			Optional dust filter			
Onboard SATA	Three onboard SATA			Diivo, o	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD			
Media reader	Optional 7-in-1 media	reader						Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)			
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main r	nemory, DirectX®	12,	1	Slot 1: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x16			
	one VGA, two Display			ndent di	splays, works alo	ng with		Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1			
	discrete graphics to s Max resolution: 4096)			1536 (\/	GA\@50Hz			Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane)			
	Some: NVIDIA Gefor					er.					
	two DisplayPo	rt, 35 wat	ts;	•	·	•	Power supply	Some: 180 watts, autosensing, 85% PSU			
Monitor Cable	Max resolution Optional DP to VGA		160 (DisplayPort			for Callaga	i owor cappry	Some: 210 watts, autosensing, 85% PSU			
Worldon Cabic	Display with intel integ					(ioi Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	Intel B360 Chipset	9 9			··· s.og.c		Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available			
Front ports* (Std.)	2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x USB 3	3.1 Type-	C Gen1 (15W ch	arging),	Preload	Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system			
, , ,	1x microphone (3.5m	m), 1x he					FIEIDau	Some: Windows® 10 Pro 64-bit			
Front ports* (Opt.	Optional: 1x media re	ader						Some: Windows 10 Home 64-bit			
Hear ports" (Std.)	4x USB 2.0, 1x serial 1x line-out (3.5mm)	(9-pin), 1	x ethernet (RJ-4	5), 1x V	GA, 2x DisplayPo		Preloaded applications (only some listed)				
Rear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCIe x1** 2x II	SB 3 1 T	vne-C Gen2 via F	PCIe x4**		Lenovo Vantage			
	(special bid only), 1x	2nd seria	l (9-pin), 4x seria	al (9-pin)	via PCIe x1,			 Microsoft Office preloaded; purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) 			
	1x parallel (25-pin), 2	x PS/2 pc	orts (keyboard/m	ouse), a	dditional RJ-45 ar	nd video					
	ports available on optional graphics or ethernet card				a lawar than thears	tical aread		Cyberlink Power2GO (only for models with DVD±RW) Cyberlink Power2GO (only for models with DVD±RW)			
	* Depending on many factors, actual data transfer speed may be lower than theoretical speed ** Choose either 2x USB 3.1 Gen1 or 2x USB 3.1 Type-C Gen2							LinkedIn			
Audio support	High Definition (HD)					itt)	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			
							Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
							<u> </u>				













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, PCIe 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		Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Ryzen 5 PRO 2600	6 / 12	3.4 / 3.9	3MB / 16MB		None	l to j z o a. a	Some: Lenovo Traditional Keyboard (USB connector), black				
	Ryzen 7 PRO 2700	8 / 16	3.2 / 4.1	+	DDR4-2933	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
Mamani	64GB max, UDIMM	DDD4 0)CCC* form	200 nin DIM	M applicate in	an FCC	Mauga	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)				
Memory	dual-channel capab		2000 , IOUI 2	200-bili Diivi	ivi sockets, n	on-ECC,	Mouse	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	3.0Gb/s, 2.5		- P	iviculalillal	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm				
	Some: M.2 SSD / F	PCIe NVN	/le, PCIe 3.0) x 4*, 32Gb	/s			• Approx. 13.2 lb (6.0 kg), weight may vary by configuration				
	* 128GB SSD M.2 (nd AMD A6	/ A8 / A10 / .	A12 processor only		Toolless cover, disk, optical removal				
Ontical	supports PCIe 3.0 x	(2, 16GD	/S Ch/o Drivo	olim (0 0mn	2)			Optional dust filter				
Optical	Some: DVD-NOIVI	ome: DVD-ROM SATA 1.5Gb/s Drive, slim (9.0mm)		nm)		Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD						
Onboard SATA	Three onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only							Bay 2: 3.5 , niernal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk)				
	available via special bid model)							Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16				
Media reader	Optional 7-in-1 med	lia reader	•					Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1				
Graphics	AMD Radeon™ Gra	MD Radeon™ Graphics in processor (only for some processors), uses main						Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1				
	memory, DirectX® 12, one VGA, two DisplayPort™ (Onboard VGA and DP ports are only available on the models with integrated graphics), supports 3 independent displays, works along with AMD discrete graphics to support more displays;					A and DP ports		Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0				
						orts 3 independent	Floor Stand	M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation				
	Max resolution: 409	IG WITH AI 6v2160 (ND discrete	: grapnics to : 1020v1200	Support mo	re displays;						
	Some: NVIDIA Gef	orce® GT	730. Direc	X 12. 2GB	GDDR5. PC	le 2.0 x16 (x8 elec.)	Power supply	Some: 180 watts, autosensing, 85% PSU				
	adapter, two	DisplayF	Port, 35 watt	:s;	0.22.10, . 0	<u></u> (,,,)		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)				
Mandanashi	Max resoluti	on: 3840:	x2160 (Disp	olayPort)@6	0Hz		1					
Monitor cable	Optional DP to VGA or DP to HDMI 1.4 of	dongle,	DP to DVI-E	dongle, DF	o to dual DP	dongle,	Limited warranty 1-year or 3-year, limited onsite service / service upgrades available					
Chipset	AMD B450 Chipse						Preload	paded operating system e: Windows 10 Pro 64-bit				
<u> </u>	2x USB 3.1 Gen2, 2		1 Con1 1v	miorophone	(2 Emm) 1	v haadahana	-	Some: Windows 10 Home 64-bit				
From ports (Std.)	(3.5mm)	X USD 3	. i Geiii, ix	microphone	e (3.5HIII), T	x rieaupriorie		Preloaded applications (only some listed)				
Front ports* (Opt.)	Optional: 1x media	reader, 2	x USB 3.1 T	vpe-C Gen2	via PCIe ca	rd (special bid only)		Lenovo Vantage Missassiti Office preligeded.				
Rear ports* (Std.)	2x USB 3.1 Gen1, 2	x USB 2	.0, 1x serial	(9-pin), 1x e	ethernet (RJ	-45), 1x VGA**,		Microsoft Office preloaded; 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)				
Poor porto* (Opt.)	(3.5mm), 1x microp			in) 1y nara	llol (OE pip)	additional D L 45		Cyberlink Power2GO (only for models with DVD±RW)				
near ports (Opt.)	Optional: 2x USB 2 and video ports ava	.∪, TX ∠N ilable on	ontional ara	nn), ix parai	ernet card	audilional HJ-45		• LinkedIn				
	* Depending on many	factore ac	tual data tran	efor enoud me		an theoretical speed	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);				
	** only available on the					·		ErP Lot 3; RoHS-compliant				
Audio support	High Definition (HD)						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				
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, Qualcomm Atheros QCA9377A (dual band),					d),						
						(dual hand)						
	Wi-Fi + Bluetooth 4.2* combo adapter, 1x1				3 QUABOIIF	i (uuai vailu),						
	Some: 11ac wireles	ome: 11ac wireless, M.2 Card, Bealtek BTI 8822BF (dual band).			d),							
	Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band),											
	Some: 11ac wireles	ss, M.2 C	ard, Qualco	mm Atheros	s QCA6174 <i>A</i>	A (dual band),						
Bluetooth™	Wi-Fi + Blue Some: Bluetooth 4.	etooth 4.2	2* combo ac	apter, 2x2	RT combo	adantor						
Diuelooth	* Hardware support											
	i lai avvai o ouppoi i	J J 1 7.2,	Dat William	co ana ca	mor ormy out	/PO.10 D1 7.1	J					



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	ar for optional	otional • Boot sequence control		
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Kensington® MicroSaver® cable) Chassis intrusion switch Boot without keyboo Individual USB port 				
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620				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 / DDR4 * System automatica						Keyboard	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black				
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane	2 SSD D / PCle I D / PCle I M Memory	NVMe, PCIe 3.0 NVMe, PCIe 3.0	x 4* x 2 State St			Mouse	Some: Lenovo Calliope Wireless 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 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 Three M.2 slots: two for WLAN		PCIe 3.0 x4 and or	ne PCIe 3.0 x2) and one	
Graphics	Intel UHD Graphics	620 in pro	ocessor, uses ma	ain mem	ory, DirectX® 12,	one			Dimension	ns (WxDxH)	Weight (Approx.)	
	DisplayPort™, one Usidisplays; Max resolution: 4096	,,		' '	, ·	ndependent		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	P to HDMI dongle			, Type-C to	Mounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75mm			, , , , ,	
Chipset	Intel SoC (System of	171					Floor Stand	Some: DIN rail mount bracket kit None				
Front ports (Std.)	* 2x USB 3.1 Gen2, 1x jack (3.5mm)	USB 3.1	Type-C Gen 2, c	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, 1> power-in [20V and >4 * Depending on many f	45W]), 1x	eťhernet (RJ-45)	, 1x Dis	pláyPort ´ '		Limited warranty	Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available				
Audia augaset	Realtek ALC233VB /			eeu may	be lower than theor	elicai speed	Preload	, ,				
Audio support WLAN	Some: 11ac wireless	s, M.2 Car	d, Realtek RTL8		(dual band),			Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit				
	Some: 11ac wireless	s, M.2 Cai	combo adapter, 1 rd, Realtek RTL8 combo adapter, 2	822CE	(dual band),		Environment	TUV ultra low noise verified (on some models), RoHS, WEEE, REACH				
	Some: 11ac wireless Wi-Fi + Bluet	s, M.2 Car cooth 5.0 c	d, Intel Wireless ombo adapter, 1	-AC 946 x1	,		MIL-SPEC test					
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Car cooth 5.0 c	d, Intel Wireless ombo adapter, 2	-AC 956 x2			Accessories	For compatible acces	•			
		ooth 5.0 c	ombo adapter, li	ntel vPro	tèchnology supp	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	None				
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security chip	Discrete TPM 2.0, TCG Certified				
	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, black 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					
	Some: 11ac wireles: Wi-Fi + Bluet				0 (dual band), technology sup	nort 2x2	Accessories	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®		,				
Note: The enecified	ations above may not be	o ovoiloble	in all regions					Lenovo July 2				













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 Memory Support Integrated			Integrated		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	ble	'		,	•	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" VVMe, 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	l 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	Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm) Four onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only available via special bid model)							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	olayPort™, o support	, supports 3 inde more displays;	pendent	displays, works a			*Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 (x4 signal) slot optional rear 2x USB2.0 / parallel / 2nd serial / cable lock / Wi-Fi antenna occupies one expansion slot					
	Max resolution: 409	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					
	Some: NVIDIA Geforce® GT 730, DirectX 12, 2GB, PCIe 2.0 x8 adapter, two DisplayPort, 35 watts;						Power supply	Some: 180 watts, autosensing, 85% PSU					
Monitor cable		tion: 3840	x2160 (DisplayP	Port)@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					Limited warranty ³ Some: 1-year or 3-year, depot service / service upgrades available						
Front ports*	Four USB 3.1 Gen				en 2 (only availabl	e via special	Some: 1-year or 3-year, limited onsite service / service upgrades ava						
Rear audio ports	bid), microphone (3 Four USB 3.1 Gen optional parallel (2 PS/2 ports (keyboa additional DisplayF Line-in (3.5mm), lir	1, optiona 5-pin), eth ard/mouse Port on op	al two USB 2.0, s nernet (RJ-45), o e); tional graphics o	serial (9-p one VGA, on some i	two DisplayPort, models	serial (9-pin), optional two	Preload	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						· ·		 Lenovo ThinkVantage Tools 					
WLAN ¹³	High Definition (HD) Audio, Realtek ALC662 / optional internal speaker (1.5 watt) Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), 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							 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				eless-AC 8265,			TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com					
	Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.1 combo adapter, Intel vPro technology support, 2x2		pport, 2x2	, 1000001100	ror compatible accessories, please go to http://www.ienovoquickpick.com								
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)	rt Wi-Fi							













ThinkCentre M910 Tiny Platform Specifications

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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 / Threads Base/Max(GHz) Cache Memory Support Integrated Graphics		Smart USB protection, allows keyboard/ Boot sequence control 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 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	Mooriariida	Toolless chassis open Toolless HDD, SSD, memory removal				
C	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Some: M.2 Solid State Drive (SSD) / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s Some: Intel Optane™ Memory (models with 7th gen Core processor), M.2		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	Some: DVD Burner (DVD±RW), slim (9.0mm), via USB external ODD box One onboard SATA 6.0Gb/s connector		M910 Tiny only 7.05" X 7.20" X 1.36" 2.91 lb (1.32 kg), vary by config				
Media reader Graphics	None Intel HD Graphics 510/530/610/630 in processor, uses main memory, DirectX® 12,	_	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				
	two DisplayPort™, one optional video port (HDMI, VGA, 3rd DP, or USB 3.1 Type-C with DisplayPort Alternate Mode), up to 3 independent displays;		With VESA mount & 7.42" X 7.30" X 2.62" 3.66 lb (1.66 kg),				
	Max resolution: 4096x2304 (DP) @ 60Hz; 4096x2304 (Type-C) @ 60Hz; 4096x2160 (HDMI) @ 24Hz; 1920x1200 (VGA) @ 60Hz		I/O box 188.4mm X 185.38mm X 66.6mm vary by config				
Monitor cable	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					
	two optional ports (Port 1 for VGA / 3rd DP / HDMI / serial / USB 3.1 Type-C Gen 1 (with DisplayPort Alternate Mode), Port 2 for serial)	Preload	Some: Windows® 7 Professional 32/64 Preloaded applications (only some preinstalled through downgrade listed)				
I/O box*	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		rights in Windows 10 Pro 64-bit Microsoft Office preloaded; (not available with 7th Gen Intel purchase a product key to activate				
	Tiny) * Depending on many factors, actual data transfer speed may be lower than theoretical speed		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),	1	(vPro models only)				
WLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		- Only for Window 7				
	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band),		Lenovo Solution CenterLenovo ThinkVantage Tools				
	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,		Create Recovery Media				
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		Adobe® Reader® Cyberlink PowerDVD Create				
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		(ĎVD±RW)				
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,	Environment	Intel Unite (vPro models only) ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),				
Bluetooth™	Wi-Fi + Bluetooth 4.2 combo adapter, Intel vPro technology support, 2x2 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	ENVIRONMENT	ENERGY STAR® 6.1, EPEAT M Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant, TUV low noise verified (on some models)				
Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,				
Manageability	Intel Active Management Technology 11.0 (Intel AMT 11.0); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi		Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)				
Security chip	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	For compatible accessories, please go to http://www.lenovoquickpick.com				

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













ThinkCentre M910 Tower Platform Specifications

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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			secor 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*				
		ne: 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), PCle 3.0 x16 (x4 signal)*				
	Some: NVIDIA Ge	force GT	X™ 1080 (onlý a	vailable v	ia special bid mo			Slot 4: no slot, only bracket for optional port extension*				
		DirectX 12, 8GB, PCIe 3.0 x16 adapter, one DVI-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					@60Hz		* Optional 2 front USB3.1 Type-C ports module occupies PCle x16 (x4 signal) slo 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 wirele Wi-Fi + Blu	ess, M.2 Cuetooth 4.	Card, Qualcomm 1 combo adapter	Atheros	QCA9377A (dual	band),		Lenovo Think Vantage Tools Create Recovery Media				
	Some: 11ac wirele	ess, M.2 C	Card, Qualcomm	Atheros	QCA6174A (dual	band),		 Adobe® Reader® 				
			1 combo adapter		Nocc-∆C 2165			Cyberlink PowerDVD Create (DVD - DW)				
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.1 combo adapter, 1x1				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, ເທ.∠ 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 M910x Tiny Platform Specifications

Processor	Intel® Celeron®, In	tel Pentiur	n®. or 6/7th Gene	eration In	itel Core™ i3 / i5 /	/ i7 Processor	Ethernet	Gigabit	ethernet. Inte	el Ethernet Connection I219-l	M(Jacks	sonville). Wake on I AN®
	,	Cores /	Frequency		Memory Support		Manageability			nt Technology 11.0 (Intel AMT 11.	` _	, , , , , , , , , , , , , , , , , , ,
	Processor Core i5-6500T		Base/Max(GHz) 2.5G / 3.1G	Cache 6 MB	(Up to) DDR4-2133	Graphics HD 530	Wanageabiiity	Intel vPr	o technology o	n some models (require choosing function through wireless connec	a vPro-sı	upport Wi-Fi
	Core i7-6700T	4/4	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Security chip			Module) 2.0*, TCG Certified	1011)	
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2100	HD 630		* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS			S	
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630	Security features	• Security slot (in rear for optional • Hard disk password				
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630			Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Power-on password Boot sequence control Boot without keyboard and mou Individual USB port disablemen Chassis intrusion switch			
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530						
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530						
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630			nistrator pass			
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	Keyboard	Some:	Lenovo Calli	ope Keyboard (USB connecto	r), black	
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630				tional Keyboard (USB conne ope Wireless Keyboard (2.4G		
Memory	32GB max, DDR4	-2400* tv	n 260-pin SO-DI	MM sock	ets non-FCC		Mouse			ope Mouse (USB connector),		JSB receiver), black
Wichiory	dual-channel capa	ble						Some:	Lenovo Calli	ope Wireless Mouse (2.4GHz	via USE	3 receiver), black
	* System automati	ically clock	ks down for the p	rocessor	s with lower mem	ory controller	Mechanical	Tiny (11	_), black colo	r: metal case		·
Storage	Some: Hard Drive	e* / SATA (6.0Gb/s, 2.5", 54	00 rpm o	r 7200 rpm, APS]	 Toolle 	ss chassis o	pen		
	Some: Solid State	Drive (S	SD)* / SATA 6.00	ab/s, 2.5"), memory removal		
	(* 2.5" HDD/SSD a Some: M.2 SSD (v 4 32Gh/e			nal toolless c nal dust filter	nassis screw		
	RAID 0/1	support (F	AID preset only	available	via special bid m	iodel)		Optio	nar adot mitor			101 1 1 1 1 1
	Some: Intel Optai	ne™ Mem	ory (models with	7th gen	Core processor),	M.2				Dimensions (WxDxH		Weight (Approx.)
Optical	Some: DVD-RON Some: DVD Burn	er (DVD±l	RW), slim (9.0mn	kternal O n), via US	DD box SB external ODD	box		M910 Tiny only 7.05" X 7.20" X 1.36" 2.91 lb (1.32 kg/s) 179mm X 182.9mm X 34.5mm vary by conf			2.91 lb (1.32 kg), vary by config	
Onboard SATA Media reader	One onboard SATA 6.0Gb/s connector None							With VI ODD b	ESA mount & ox	7.42" X 7.30" X 2.48' 188.4mm X 185.38mm X (3mm	3.66 lb (1.66 kg), 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					DirectX [®] 12, 3 3.1 Type-C		With VI	ESA mount &		· Cmm	3.66 lb (1.66 kg),
	with DisplayPort A	Iternate M	lode), up ṫo 3 ind	ependen	it displays;	, , ,						vary by config
		96x2160	(HDMI)@24Hz; 1	920x120	0 (VGA) @60Hz		VESA mount Floor Stand			nt bracket kit, supports VESA r stand for vertical orientatior	75mm a	and 100mm
	Some: AMD Rade	eon™ RX 4 ienlavPort	460 , DirectX 12, (35 watts (TDP)	4GB, PC	le 3.0 x8 adapter independent disp	(low profile),	Power supply	135 watts AC/DC adapter, autosensing, 88% PSU				
	along with	2 onboard	DisplayPort to	support ι	up to 6 independe	nt displays;	Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available				es available
	Max resolu	ition: 5120)x2880 @60Hz (ι	up to 2 m	ini DisplayPort);		,			year, limited onsite service		
Monitor cable	Optional DP to VG	A, DP to I	Sx2160 @60Hz (ı DVI-D, DP to dua	up to 4 m I DP, min	ini DisplayPort) i DP to DP, or DP	to HDMI 1.4	Preload	Some:	Some: Windows® 7 Professional 32/64 Preloaded applications (only so preinstalled through downgrade listed)			
Chipset	Intel Q270 Chipse	et]		rights in Wir	e preloaded;		
Front ports*	Two USB 3.1 Gen	1 (one is A	Always On and fa	st charge	e), one microphor	ne (3.5mm),	1		(not availabl	e with 7th Gen Intel purch	ase a pr	oduct key to activate
	one headphone / r	microphon	e combo jack (3.	5mm)				Some:	processor) Windows 10	Pro 64-bit - Only fo		
Rear ports*	Four USB 3.1 Gen									Library Od Ish		vnload link
	USB 3.1 Gen1), effor the models with	n BX 460	oranhics): Port 1	for IVGA	/ 3rd DP / HDMI	/ serial /				(vPro	models	only)
	USB 3.1 Type-C G	ien 1 (with	DisplayPort Alte	rnate Mo	ode)]; Port 2 for [s	erial]				- Only fo	r Windo	w 7
I/O box*	Optional external I	/O box, ex	tends two USB 2	2,0, two l	JSB 3.1 Gen1, ar	nd one serial				• Lenov	o Solution Think	on Center /antage Tools
	on rear, two USB 2 * Depending on man											ery Media
Audio support	High Definition (HI	· ·		, ,			-			 Adobe 	Reade	er [®]
		, ,				,	-			Cybei (DVD:		erDVD Create
WLAN ¹³		uetooth 4.	2 combo adapter	, 1x1								ro models only)
	Some: 11ac wirel				QCA6174A (dual	band),	Environment			, EPEAT™ Gold rating (North	America	a),
	Some: 11ac wirel	ess, M.2 (Sand Wire	eless-AC 3165,					UARD®, RoHS-compliant, ed (on some models)		
			2 combo adapter		aloce AC OOSE		MIL-SPEC test			ary certification (Low Pressur	· [Altituc	le]. High Temperature
	Some: 11ac wirel Wi-Fi + Bli		zard, intel Dual E 2 combo adapter		EIESS-AU 8205,		2 0. 20 1031	Low Te	mperature, Te	mperature Shock, Humidity,	Sand an	d Dust, Vibration, Shock,
	Some: 11ac wirel	ess, M.2 (Card, Intel Dual E	and Wire	eless-AC 8265,				, Solar Radia			
Divista sti Tu	Wi-Fi + Bli	uetooth 4.	2 combo adapter	, Intel vP	ro technology sup		Accessories	For con	npatible acce	ssories, please go to http://w	ww.lend	ovoquickpick.com
Bluetooth™	Some: Bluetooth * Hardware suppo											
	riaiuwaie suppo	113 11 4.2	, but will to moo	unu tall	ici oriiy supports	D1 4.1						





















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, bl 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 Bay 2: 3.5", 1" high, internal, HDD/SSD			
Media reader	Optional 7-in-1 media		,								
Graphics			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			
1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) 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) 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, 1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 1x Thunderbolt 3 (combo USB3.1 Type-C Gen 2 / DisplayPort) via PCle x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card * Depending on many factors, actual data transfer speed may be lower than theoretical speed						Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit				
						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			
						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com				



















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	uetooth Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-		grated in Wi-Fi + B	combo adapter
	Processor	Cores /	Frequency		Memory Support	Integrated	Ethernet (Opt.)	Gigabit ethernet, Inte	el Ethernet Conne	ction I219-LM(Jacks	sonville), Wake on LAN® rnet, 4x RJ-45, PCIe x4
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	L		-		illet, 4x hJ-45, PGIE X4
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610	Manageability	Intel Active Manager Intel vPro technology	v on some models	(require choosing a	vPro-support Wi-Fi
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		adapter to enable vP	ro function through	h wireless connection	on)
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified			
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630	Security features	• Security slot (in rea	ar for optional	 Boot sequence 	
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610		 Kensington® Micros Chassis intrusion s 		Boot without keyIndividual USB p	
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Power-on passwor			ection, allows keyboard/
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		 Administrator pass 	sword		cks all storage devices
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		 Hard disk passwor 			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calli			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradi Some: Lenovo Calli	itional Keyboard (L	JSB connector), bla	CK ISB rocciver) black
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB (connector), black	ob receiver), black
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Finge	erprint Mouse (US	B 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		Toolless chassis or			rew)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		Toolless HDD, SSEOptional dust filter		ll	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630				3.0 x8 slot (low-profi	le), 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						1		Dimension	ns (WxDxH)	Weight (Approx.)
Storage	* System automatically clocks down for the processors with lower memory controlle Some: Hard Drive / SATA 6.0Gb/s, 2.5", 5400 rpm or 7200 rpm					ory controller		Tiny only	7.05" X 7.	20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config
· ·	Some: Solid State Dr Some: M.2 SSD / PC * 128GB SSD M.2 (22	le NVMe	, PCIe 3.0 x 4*, 3	32Gb/s	Cle 3.0 x 2, 16Gh	n/s		With VESA mount & ODD box	7.42" X 7.	30" X 2.48" 5.38mm X 63mm	3.66 lb (1.66 kg), vary by config
Optical	Some: Intel Optane™ Some: DVD-ROM, sli Some: DVD Burner (I	Memory m (9.0mr	(not support Ce n), via USB exte	leron / P rnal ODI	Pentium Processo D box	or), M.2	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			nd 100mm
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector	via OSD	external ODD t	, OX	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU			
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	MI, one o	optional video po	ort (2nd F	HDMÍ, VGA, 2nd	DP,		Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU			
	or USB 3.1 Type-C Ge 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 Some: 1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	Optional DP to VGA d Display with intel integ	ongle, DF		e, DP to	dual DP dongle		Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit			
Chipset	Intel Q370 Chipset	gratou gre	(prii00), 01 D1 to	TIDIVII I	.+ dorigio		-	Some: Windows 10 Preloaded applicati		isted)	
	* one USB 3.1 Gen1 (A							 Lenovo Vantage Microsoft Office pr 		iotouj	
Rear norts (Std.)	one microphone (3.5n * 2x USB 3.1 Gen2, 2x							purchase a produc	ct key to activate		
	* Two optional ports (mi	utually ex	clusive with PCI	e càrd):	Port 1 for VGA /	2nd DP /		Cyberlink PowerD	VD (only for model	Is with DVD / DVD±	RW)
	2nd HDMI / serial / US	SB 3.1 Ty	pe-C Gen 1 with	DP func	ction); Port 2 for s	serial;		Cyberlink Power20LinkedIn	30 (only for mode	is with DVD±RW)	
	Optional ports via PCI PCIe x1, 1x Thunderb	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	I-pin) via		Intel Unite (Machin	ne Type 10V8 mod	lels only)	
	* Depending on many fac						Environment	ENERGY STAR® 7.0). FPFAT™ Silver r	rating (North Americ	a), FrP Lot 3, TCO.
Audio support	Realtek ALC233VB2 /		<u>.</u>			F 7 7 7		TUV ultra low noise	verified (coming so	oon, on some mode	ls), RoHS-compliant
WLAN	Some: 11ac wireless,	M.2 Car	d, Realtek RTL8	821CE (MIL-SPEC test				e], High Temperature, d Dust, Vibration, Shock,
	Some: 11ac wireless.	. M.2 Car	ombo adapter, 1 d, Realtek RTL8	822BE (dual band),			Fungus, Solar Radia	tion)		
	Some: 11ac wireless	, M.2 Car		nd Wirele	ess-AC 3165,		Accessories	For compatible acces	ssories, please go	to http://smartfind	l.lenovo.com
	Some: 11ac wireless	, M.2 Car		nd Wirele	ess-AC 8265,						
			ombo adapter, 2		O (dual band)						
	Some: 11ac wireless Wi-Fi + Blueto		d, intel vvireless ombo adapter, li			port, 2x2					





















ThinkCentre M920 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 8th /9th Gen	Intel Co	re™ i3 / i5 / i7 / i9	Processor		USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018),		
	Processor	Cores /	Frequency	Cache	Memory Support			additional RJ-45 and video ports available on optional graphics or ethernet card		
		Threads	Base/Max(GHz)		(Up to)	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	UHD 610	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 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1		
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2		
	Pentium Gold G5400 Pentium Gold G5500	2/4	3.7G 3.8G	4 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 630		Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),		
	Pentium Gold G5600	2/4	3.8G 3.9G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630		Intel vPro technology support, 2x2		
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400 DDR4-2400	UHD 610	Bluetooth™	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®		
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400 DDR4-2400	UHD 630	Ethernet	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCle x4		
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	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	Security chip	adapter to enable vPro function through wireless connection) Discrete TPM 2.0, TCG Certified		
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	, ,	s • Security slot (in rear for optional • Power-on password		
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security leatures	Kensington® MicroSaver® cable) • Administrator password		
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Padlock loop 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 Optional chassis intrusion switch Boot without keyboard and mouse Individual USB port disablement 		
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)		
	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	1	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 Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
Memory	64GB max, DDR4-26 * System automatical						Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black		
Storage	Some: Hard Drive / Some: Solid State D	rive (SSD) / SATA 6.0Gb/s	s, 2.5"	·			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
	* SSD M.2 (2242) PC Some: Intel Optane	Cle NVMe	only supports P	Cle 3.0 x	2, 16Gb/s		Mechanical	 Tower (18L), black color, metal case (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm 		
Optical	Optional DVD-ROM of	or DVD Bu	rner (DVD±RW)	. SATA 1	.5Gb/s Drive. slin	n (9.0mm)		 Approx. 15.45 lb (7 kg), weight may vary by configuration Toolless cover, disk, optical, extension card removal 		
Onboard SATA	Four onboard SATA 6	6.0Gb/s co	nnectors, RAID					Optional carry handle, dust filter		
Madia raadar	available via special b	bid model)					Bay 1: Slim external ODD bay		
Media reader	Optional 7-in-1 media				D: 174%	10	_	Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD		
Graphics	Intel UHD Graphics one VGA, two Display	610/630 I	n processor, use	s main n	nemory, DirectX®	12, na with		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)		
	discrete graphics to s			nacm an	spiays, works alo	ing with		Bay 5: 2.5", internal, HDD/SSD (optional bay)		
	Max resolution: 4096:	x2304 (DI	P)@60Hz;2048x	1536 (V	GA)@50Hz			Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and		
	Some: NVIDIA Gefor			2GB, PC	le 2.0 x16 adapte	er,		1 eSATA device (front access HDD) Slot 1: full-length (< 268mm) full-height (< 112mm), PCIe 3.0 x16		
	two DisplayPo		สร; :160 (DisplayPor	t)@60Hz				Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1		
	Some: NVIDIA Gefor	rce GTX	1060 (DisplayFor	l only). D	, irectX 12. 6GB. F	Cle 3.0		Slot 3: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16 (x4 signal)		
	x16 adapter, 1	1x DVI-D,	1x HDMI, 3x DP,	120 wat	ts, occupies two	slots;		Slot 4: no slot, only bracket for optional port extension		
)Hz; 409	6x2160 (HDMI)@	060Hz		M.2 card slots: Two (one for WLAN, one for SSD/Optane)		
Monitor Cable	5120x3200 (D Optional DP to VGA ()P)@60H:	Z P to DVI D donal	0 DB to	dual DP dangla	(for Collago	Power supply	Some: 180 watts, autosensing, 85% PSU		
World Gablo	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	4 dongle	(ioi collage		Some: 250 watts, autosensing, 85% PSU Some: 400 watts, autosensing, 92% PSU (only available via special bid)		
Chipset	Intel Q370 Chipset	<u> </u>					l insite al community			
) 2x USB 3.1 Gen2, 2x						Limited warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available		
1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) Front ports* (Opt.) Optional: 1x media reader						,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
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) Rear ports* (Opt.) Optional: 2x USB 2.0, 2x USB 3.1 Gen1 via PCle x1, 2x USB 3.1 Type-C Gen2 via							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		
. ισαι ροι ισ (Ορι.	PCIe x4 (special bid (1x parallel (25-pin), 2	only), 1x 2	2nd serial (9-pin)	, 4x seria	al (9-pin) via PCI	e x1,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
	paranor (20 pin), 2	, O, _ pc	(noyboard/iii	5 400/, 17		00.1100				



















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 DisplayPort, up to 4 independent display	vs. works along with	
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	1	onboard DP and HDMI to support up to 6 indepe Max resolution: 5120x2880@60Hz ((up to 2 M	endent displays;	
		Threads	Base/Max(GHz)		(Up to)	Graphics	4	4096x2160@60Hz ((up to 4 M	lini DisplayPort)	
	Celeron G4900 Celeron G4920	2/2	3.1G 3.2G	2 MB 2 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 610	Monitor cable	Optional DP to VGA dongle, DP to DVI-D dongle, DP to d with intel integrated graphics), or DP to HDMI 1.4 dongle,	lual DP dongle (for Collage Display	
	Celeron G4930	2/2	3.2G 3.2G	2 MB	DDR4-2400 DDR4-2400	UHD 610	Chipset	Intel Q370 Chipset	, Will il Di to Di	
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	1∟	· · · · · · · · · · · · · · · · · · ·		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Front ports (Std.)*	one USB 3.1 Gen1 (Always On and fast charge), one US one microphone (3.5mm), one headphone / microphone (B 3.1 Type-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 USB 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 (mutually exclusive with PCIe card): F	Port 1 for VGA / 2nd DP / 2nd HDMI /	
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	serial / USB 3.1 Type-C Gen 1 with DP function); Port´2 fo Optional ports via PCIe card: 2x USB 3.1 Gen1 via PCIe	or serial; x1. 4x serial (9-pin) via PCIe x1. 1x	
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo USB3.1 Type-C Gen 2 / DP) via Po	Cle x4	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	1	* Depending on many factors, actual data transfer speed	,	
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / optional internal speaker (1.5 watt	or 2 watt)	
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL882		
	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 RTL882 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band	P2BE (dual band), 2x2	
	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		
	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-Al		
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Bluetooth	Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi +	BT combo adapter	
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jack	sonville), Wake on LAN®	
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit eth	nernet, 4x RJ-45, PCIe x4	
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);	D	
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing adapter to enable vPro function through wireless connect	a vPro-support vvi-Fi	
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified	,	
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features	 Security slot (in rear for optional Kensington® MicroSaver® cable) Chassis intrusion switch Power-on password Administrator password Hard disk password Boot sequence control Boot sequence control Boot sequence control Som timout keyboard and mouse Individual USB port disablement Smart USB protection, allows keyboard/mouse only, blocks all storage devices 		
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610]			
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610]			
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630				
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630				
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), bla Some: Lenovo Traditional Keyboard (USB connector), b	ick	
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630	1	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via	uSB receiver), black	
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	1	Some: Lenovo Fingerprint Mouse (USB connector), Will Some: Lenovo Calliope Wireless Mouse (2.4GHz via U	ndows Hello support, black	
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Machaniaal	,	OB receivery, black	
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color; metal case Toolless chassis open (need optional toolless chassis s	screw)	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	4	 Toolless HDD, SSD, memory removal 	,	
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	-	 Optional dust filter one 2.5" bay for HDD/SSD, one PCIe 3.0 x8 slot (low-pro 	file) three M 2 slots (one for WI AN	
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	4	two for M.2 SSD), 2.5" HDD/SSD and PCIe card are muti		
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	4	Dimensions (WxDxH)		
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630	4		Weight (Approx.)	
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	4	Tiny only 7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5r	2.91 lb (1.32 kg), mm vary by config	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666 DDR4-2666	UHD 630	4	With VESA mount & 7.42" X 7.30" X 2.48"	3.66 lb (1.66 kg),	
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630	<u> </u>	ODD box 188.4mm X 185.38mm X 63		
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 bracket kit, supports VESA 75mm Optional system floor stand for vertical orientation	and 100mm	
Storage	Some: Hard Drive / SA	TA 6.0Gb/s	, 2.5", 5400 rpm o	r 7200 rp	m		Power supply	135 watts AC/DC adapter, autosensing, 88% PSU		
	Some: Solid State Drive Some: M.2 SSD (support	art un tá tw	n M 2 SSD) / PCIe	NVMe	PCIe 3 0 x 4* 32GI	h/s	- '''			
	BAID 0/1 sunno	rt (RAID ni	reset only available	via snéo	cial hid model)	o, o,	Limited warranty	Some: 1-year or 3-year, depot service / service upgra Some: 1-year or 3-year, limited onsite service / serv		
	* 128GB SSD M 2 (2242) PCIe NVI	vie only supports F	7CIE 3 0 1	(2 16Gh/s		Preload		ieo apgiados arailabio	
Optical	Some: Intel Optane™ N Some: DVD-ROM, slim	(9.0mm).	via USB external C	/ Penliun DDD box	1 Processor), IVI.2		Teload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
Onboard SATA	Some: DVD Burner (D\ One onboard SATA 6.0G	/D±RW), sl	lim (9.0mm), via U	SB exteri	nal ODD box		Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV ultra low noise verified (coming soon, on some models), RoHS-compliant		
Graphics	Intel HD Graphics 610/6	30 in proc	essor. uses main n	nemory, [DirectX® 12, one Di	splayPort™,	MIL ODEO : :	<u> </u>		
·	one HDMI, one optional or USB 3.1 Type-C Gen1	video port (with Displa	(2nd HDMI, VGA, 2 ayPort function), up	2nd DP, p to 3 ind	ependent displays;		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)		
	Max resolution:c4096x23 4096x2 Some: AMD Radeon™	216Ò (ońbo	ard HDMI)@24Hz	: 2048x1	536 (VGA)@50Hz		Accessories	For compatible accessories, please go to http://smartfin	d.lenovo.com	













ThinkSmart Hub 500 Platform Specifications

Positioning	Purpose-built Skype Room Systems device	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified			
Processor	7th Gen Intel Core™ i5 Processor with vPro Processor Cores / Frequency Base/Max(GHz) Cache (Up to) Graphics Core i5-7500T 4 / 4 2.7G / 3.3G 6 MB DDR4-2400 HD 630	Security features	optional Kensington® MicroSaver® cable; • Boot sequence control Kensington lock also locks chassis) • Secure cable management door • Boot without keyboard and mouse • USB port disablement			
Memory	4GBx2, DDR4-2400, two 260-pin SO-DIMM sockets, dual-channel capable	Keyboard Mouse	None None			
Storage	128GB M.2 Solid State Drive (SSD) / PCle NVMe, PCle 3.0 x 4, 32Gb/s	Mechanical	Business black color			
Graphics Display	Intel HD Graphics 630 in processor, uses main memory, DirectX® 12 11.6" (294.64mm) Full HD 1080p (1920x1080) TFT color, wide viewing angle (+/-85°), LED backlight, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, anti-glare, smudge resistant Supports 10-point touch, OGS		 (WxDxH) 7.60" X 10.98" X 7.02"; 193.25mm X 278.9mm X 178.45mm Approx. 5.51 lb (2.5 kg) Secure Cable Management Door, secures physical ports and prevents cables being accidentally disconnected 360 degree rotatable Display 			
Sensor	IR Presence/Motion sensor, automatically dim / brighten display	Power supply	90 watts adapter, autosensing, 88% efficiency			
LED indicators	(Detection angle: +/- 45% (from display); detection distance: 3 meters at minimum) 360 degree LED ring on hinge neck, indicates Skype status for all users in the	Limited warranty ³	3-year, limited onsite service / service upgrades available			
	room; power LED on power button	Preload Preloaded operating system				
Chipset	Intel Q270 Chipset		Windows® 10 IoT Enterprise CBB X64 (RS3)			
Ports*	Four USB 3.1 Gen1(Type A), two HDMI-out, one HDMI-in (1920x1080@60Hz at maximum), one ethernet (RJ-45), one headphone / microphone combo jack		Preloaded applications Microsoft Skype Room Systems App			
	(3.5mm), one power connector	Certification	Skype for Business Group Certified			
M.2 card slot	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Two M.2 Card slots (one for WLAN, one for SSD)	Environment	ErP Lot 26, GREENGUARD® certified, RoHS, WEEE			
		Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com			
Audio support	Dual 4W speakers, 2 omnidirectional microphones for 360 degree audio capture					
WLAN ¹³	11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,Wi-Fi + Bluetooth 4.1* combo adapter, Intel vPro technology support, 2x2					
Bluetooth™	combo adapter, Intel vPro technology support, 2x2 Bluetooth 4.1* wireless, integrated in Wi-Fi + Bluetooth combo adapter * Hardware supports Bluetooth 4.2, but Win10 RS3 only supports Bluetooth 4.1					
Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®					
Manageability	Intel Active Management Technology 11.0 (Intel AMT 11.0), Intel vPro technology]				

See footnotes for more detailed information

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ThinkSmart Hub 500 for Zoom Platform Specifications

Positioning	Purpose-built Zoom Rooms device	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified			
Processor	7th Gen Intel Core™ i5 Processor with vPro Processor Cores / Frequency Base/Max(GHz) Core i5-7500T 4 / 4 2.7G / 3.3G 6 MB DDR4-2400 HD 630	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Boot sequence control Boot without keyboard and mouse USB port disablement 			
Memory	4GBx2, DDR4-2400, two 260-pin SO-DIMM sockets, dual-channel capable	Keyboard Mouse	None None			
Storage	128GB M.2 Solid State Drive (SSD) / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s	Mechanical	Business black color			
Graphics Display	Intel HD Graphics 630 in processor, uses main memory, DirectX® 12 11.6" (294.64mm) Full HD 1080p (1920x1080) TFT color, wide viewing angle (+/-85°), LED backlight, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, anti-glare, smudge resistant Supports 10-point touch, OGS	,	 (WxDxH) 7.60" X 10.98" X 7.02"; 193.25mm X 278.9mm X 178.45mm Approx. 5.51 lb (2.5 kg) Secure Cable Management Door, secures physical ports and prevents cables being accidentally disconnected 360 degree rotatable Display 			
Sensor	IR Presence/Motion sensor, automatically dim / brighten display	Power supply	90 watts adapter, autosensing, 88% efficiency			
LED indicators	(Detection angle: +/- 45% (from display); detection distance: 3 meters at minimum) 360 degree LED ring on hinge neck, indicates Skype status for all users in the	Limited warranty ³	3-year, limited onsite service / service upgrades available			
	room; power LED on power button	Preload	Preloaded operating system			
Chipset	Intel Q270 Chipset		Windows® 10 IoT Enterprise SAC X64 (RS5) Preloaded applications			
Ports*	Four USB 3.1 Gen1(Type A), two HDMI-out, one HDMI-in (1920x1080@60Hz at maximum), one ethernet (RJ-45), one headphone / microphone combo jack		Zoom Rooms Application			
	(3.5mm), one power connector	Certification	Zoom Recommended Hardware			
M.2 card slot	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Two M.2 Card slots (one for WLAN, one for SSD)	Environment	ErP Lot 26, GREENGUARD® certified, RoHS, WEEE			
		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Audio support	Dual 5W speakers, 2 omnidirectional microphones for 360 degree audio capture					
WLAN ¹³	11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,Wi-Fi + Bluetooth 4.1*					
Bluetooth™	combo adapter, Intel vPro technology support, 2x2 Bluetooth 4.1* wireless, integrated in Wi-Fi + Bluetooth combo adapter * Hardware supports Bluetooth 4.2, but Win10 RS3 only supports Bluetooth 4.1					
Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®					
Manageability	Intel Active Management Technology 11.0 (Intel AMT 11.0), Intel vPro technology					

See footnotes for more detailed information

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ThinkCentre Tiny-in-One (TIO) 22

Model	10LKPAR6++ / 10L	KPAT6++		Ī					
Form factor			e when optional Tiny slots into	1					
Commontible Time		clean cabling and effortle							
Compatible Tiny:	M53 Tiny, Chromet		y*, M83 Tiny, M73 Tiny*, or						
	* Non-TIO models	can't be turned on by pres	sing power button of TIO 22						
Panel	TFT-LCD, In-Plane	Switching (IPS), White LE	D backlight]					
Viewable image size Max view area (W x H)	18.74" x 10.54" / 47	21.5" (546.1mm) diagonal 18.74" x 10.54" / 476.06mm x 267.79mm							
Bezel Width	Top / Side: 2mm, B	ottom: 16.3mm							
Optimum resolution Aspect ratio	1920x1080 16:9								
Pixel pitch (mm)	0.24795mm								
Dot/Pixel per Inch Brightness	102.4 dpi 250 nits or cd/m² (t	ypical)							
Contrast ratio	1000:1 (typical)	,							
Pixel response time Color gamut	7ms 72%								
Anti-reflective	Anti-glare		-1						
Preset resolutions		ontal, 178° (+/- 89°) vertic	aı	1					
Freser resolutions	640x350 @ 70Hz 640x480 @ 60Hz,	66Hz, 72Hz, 75Hz							
	720x400 @ 70Hz	70U- 75U-							
	800x600 @ 60Hz, 1024x768 @ 60Hz.								
	1152x864 @75Hz	1152x864 @75Hz							
		1280x800 @ 60Hz 1280x1024 @ 60Hz, 72Hz, 75Hz							
	1366x768 @ 60Hz								
		1440x900 @ 60Hz, 75Hz 1600x1200 @ 60Hz, 70Hz, 75Hz							
	1680x1050 @ 60H	_							
Presets / user settings	1920x1080 @ 60H Presets: 25; user se								
On screen display	On screen display	with digital user controls (8	3 languages)	1					
Control features		O mode / standalone mon sources) / Back button, Lef	itor mode, switches video /						
		Selection button / Menu bu							
Tiny-in-One Power On			ver button positioned on TIO						
Front ports		o USB 2.0 (when M73 or N	y support, see compatible list) 1/153 installed or USB 2.0						
·		upstream port), one head	Iphone / microphone combo						
	jack (3.5mm) * The USB ports ar	e only available when a Ti	ny is istalled or a PC is						
Oide mente	connected via USB	upstream port							
Side ports Rear ports		oy installed Tiny (optional) 2 port, one USB upstream	port, one power connector						
3-in-1 Cable	Undetachable 3-in-	1 cable (Power connecter,	USB 3.0 [supports USB 3.0/						
Internal Speaker	USB 2.0], DisplayP 1.5 watt x1	ort 1.2), only for connecting	g to Tiny installed (optional)						
Security	Security keyhole fo		able lock (Kensington® lock	1					
	compatible), locks offered by Tiny inst	optional Tiny with TIO 22 to	ogether, more security features	1					
Mechanical	Dimensions	TIO 22 without stand	TIO 22 with stand	1					
	W x D x H (inch)	19.25 x 2.65 x 12.47	19.25 x 9.90 x 14.02 - 18.35						
	W x D x H (mm)			1					
	** Y D Y U (IIIIII)	489.06 x 67.2 x 316.78	489.06 x 251.4 x 356.07 - 466.07						
	Weight (approximately)	11.27 lb /5.1	1 kg (with stand)						

Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Adjustable stand	Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 15.57 watts typical, 35 watts maximum, <0.5 watts standby / suspend
Limited warranty ³	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
VESA-compliant ² Ergonomics Emission standards Environmental Windows certifications	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307 FCC Class B TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0 EPEAT™ Gold rating, ULE Gold, TUV, VOC Windows 7, Windows 8/8.1, and Windows 10 certified
Ship group	TIO 22 (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 Compatible list									
Model	M900 Tiny, M700 Tiny, M600 Tiny,	M93/p Tiny,	Chromebox							
	M83 Tiny, M53 Tiny	M73 Tiny								
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) 22 Gen3

Model	Non-touch model: Touch model:	10R1PAR1++/10R1PAR1++/10R0PAR1++/10R0PAR1		ı				
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						
Compatible Tiny:		-	ess setup 15 / M93/p* / M83 / M73* / M53 /					
,	Chromebox Tiny	Chromebox Tiny * Non-TIO models can't be turned on by pressing power button of TIO						
Denel		TFT-LCD, In-Plane Switching technology**, White LED backlight						
Panel	Notes: In-Plane Sv	witching may refer to V	A, PLS, and IPS panels	L				
Viewable image size	21.5" (546.1mm) d	iagonal		}				
Max view area (W x H) Bezel Width	Top / Side: 2mm, B	76.1mm x 267.8mm						
Native resolution	1920x1080	ottom: LL: min		Ì				
Multi-touch		nulti-touch, supports W	lake on Touch	١.				
Aspect ratio	16:9 0.24795mm			١				
Pixel pitch (mm) Dot/Pixel per Inch	102.4 dpi			1				
Brightness	250 nits or cd/m² (t	typical)						
Contrast ratio	1000:1 (typical)			1				
Pixel response time		er drive to 4ms, 6ms						
Color gamut Anti-reflective	72% Anti-glare							
Viewing angle at 10:1 Cl		zontal, 178° (+/- 89°) ve	ertical					
Preset resolutions	640x350 @ 70Hz							
	640x480 @ 60Hz,	66Hz, 72Hz, 75Hz						
	720x400 @ 70Hz	72Hz 75Hz						
		800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz						
	1152x864 @75Hz							
	1280x800 @ 60Hz							
	1280x1024 @ 60H 1366x768 @ 60Hz							
	1440x900 @ 60Hz							
	1600x1200 @ 60H							
	1680x1050 @ 60H							
Procests / user cottings	1920x1080 @ 60H Presets: 25; user s							
Presets / user settings			la (9 languages)	ł				
On screen display Control features		with digital user contro n	g button (TIO / monitor mode),					
Common locatorios	Right / Br	ightness button, Enter	/ Menu button, Power button					
	Bottom: Volume up	p button, Volume down	button					
Tiny-in-One Power On			Power button positioned on TIO					
Side ports (TIO)			e Tiny support, see compatible list) B or M53 installed or USB 2.0					
Oldo porto (110)	connected via USE		of Mod motalied of GGB 2.0					
			en a Tiny is istalled or a PC is					
Cido porto (Tipu)		via USB upstream por						
Side ports (Tiny) Rear ports		by installed Tiny (optio	nai) am port, one power connector					
3-in-1 Cable	Undetachable 3-in-	-1 cable (Power conne	cter, USB [supports USB 3.1 Gen1					
	/ USB 2.01. Display	Port), only for connect	ing to Tiny installed (optional)					
Camera	720p camera with	dual microphone for V	OIP, LED indicator					
Internal Speaker	2 watt x2			ł				
Security		optional Tiny with TIO	al cable lock (Kensington® lock 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)
,	Adjustable stand	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; Pivot: clockwise 0° to 90°
4	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 (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
1		

ThinkCentre Tiny-in-One 22 Gen3 Compatible list							
Model	M910 / M710 / M900 / M700 /	M93/p Tiny,	Chromebox				
	M600 / M715 / M83 / M53 Tiny	M73 Tiny					
Turn on TIO and							
Tiny together via	Tiny together via 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

Model	10LLPAR6++ / 10L	LPAT6++				
Form factor		a full All-In-One experience clean cabling and effortle	e when optional Tiny slots into			
Compatible Tiny:		•	y*, M83 Tiny, M73 Tiny*, or			
	M53 Tiny, Chromet		oing power button of TIO 24			
Panel		Switching (IPS), White LE	sing power button of TIO 24			
Viewable image size	23.8" (604.7mm) di	agonal	D backlight			
Max view area (W x H) Bezel Width	21.06" x 12.32" / 535.0mm x 313.0mm Top / Side: 2mm, Bottom: 16.3mm					
Optimum resolution	1920x1080					
Aspect ratio Pixel pitch (mm)	16:9 0.2745mm					
Dot/Pixel per Inch Brightness	92.6 dpi 250 nits or cd/m ² (t	vnical)				
Contrast ratio	1000:1 (typical)	ypicai)				
Pixel response time Color gamut	7ms 72%					
Anti-reflective	Anti-glare		-1			
		ontal, 178° (+/- 89°) vertic	al			
Preset resolutions	640x350 @ 70Hz 640x480 @ 60Hz,	66Hz, 72Hz, 75Hz				
	720x400 @ 70Hz 800x600 @ 60Hz,	79Hz 75Hz				
	1024x768 @ 60Hz					
	1152x864 @75Hz 1280x800 @ 60Hz					
	1280x1024 @ 60H	z, 72Hz, 75Hz				
	1366x768 @ 60Hz 1440x900 @ 60Hz	, 75Hz				
	1600x1200 @ 60H: 1680x1050 @ 60H					
5	1920x1080 @ 60H	z				
Presets / user settings	Presets: 25; user se	ettings: 25 with digital user controls (8) languages)			
On screen display Control features	Mode-switching (TI	O mode / standalone mon	itor mode, switches video /			
		sources) / Back button, Lef Selection button / Menu bu				
Tiny-in-One Power On	Pressing Alt + P or	keyboard or pressing Pov	ver button positioned on TIO			
Front ports	Two USB 3.0 or two	O and Tiny (only some Tin o USB 2.0 (when M73 or N	y support, see compatible list) 153 installed or USB 2.0			
•	connected via USE		lphone / microphone combo			
	jack (3.5mm) * The USB ports ar	e only available when a Ti	ny is istalled or a PC is			
Side ports	connected via USE Side ports offered I	supstream port by installed Tiny (optional)				
Rear ports	One DisplayPort 1.	2 port, one USB upstream	port, one power connector			
3-in-1 Cable			USB 3.0 [supports USB 3.0/ ig to Tiny installed (optional)			
Internal Speaker	1.5 watt x1	,, : , ::: :::::::::::::::::::::::::::				
Security			able lock (Kensington® lock ogether, more security features			
	offered by Tiny inst		ogothor, more eccurity reatures			
Mechanical	Dimensions	TIO 24 without stand	TIO 24 with stand			
	W x D x H (inch)	21.24 x 2.7 x 13.64	21.24 x 9.90 x 15.16 - 19.46			
	W x D x H (mm)	539.6 x 68.2 x 346.45	539.6 x 251.4 x 385.08 - 495.08			
	Weight (approximately)	12.25 lb /5.5	7 kg (with stand)			
		l				

Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Adjustable stand	Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 16.7 watts typical, 35 watts maximum, <0.5 watts standby / suspend
Limited warranty ³	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
VESA-compliant ² Ergonomics Emission standards	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307 FCC Class B
Environmental Windows certifications	TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0 EPEAT™ Gold rating, ULE Gold, TUV, VOC Windows 7, Windows 8/8.1, 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 Compatible list						
Model	M900 Tiny, M700 Tiny, M600 Tiny,	M93/p Tiny,	Chromebox			
	M83 Tiny, M53 Tiny	M73 Tiny				
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	Tiny-in-One, offers	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into						
Competible Tipy:		ean cabling and effortles						
Compatible Tiny:	Chromebox Tiny)U / IVI / UU / IVI 6 UU / IVI / I :	5 / M93/p* / M83 / M73* / M53 /					
		* Non-TIO models can't be turned on by pressing power button of TIC						
Panel	TFT-LCD, In-Plane	Switching technology**	, White LED backlight					
Vioughla imaga siza		vitching may refer to VA	, PLS, and IPS panels					
Viewable image size Max view area (W x H)	23.8" (604.7mm) di 21.06" x 12.32" / 53	35.0mm x 313.0mm						
Bezel Width `	Top / Side: 2mm, B							
Native resolution Multi-touch	1920x1080	nulti-touch, supports Wa	ke on Touch					
Aspect ratio	16:9	nulli-touch, supports wa	ike off fodelf					
Pixel pitch (mm)	0.2745mm							
Dot/Pixel per Inch Brightness	92.6 dpi 250 nits or cd/m² (t	vnical)						
Contrast ratio	1000:1 (typical)	ypicai)						
Pixel response time		er drive to 4ms, 6ms						
Color gamut Anti-reflective	72% Anti-glare							
Viewing angle at 10:1 CI		ontal, 178° (+/- 89°) ver	tical					
Preset resolutions	640x350 @ 70Hz							
	640x480 @ 60Hz,	67Hz, 72Hz, 75Hz						
	720x400 @ 70Hz 800x600 @ 60Hz,	72Hz. 75Hz						
	1024x768 @ 60Hz							
	1152x864 @75Hz 1280x800 @ 60Hz							
	1280x800 @ 60Hz 1280x1024 @ 60H							
	1366x768 @ 60Hz							
	1440x900 @ 60Hz							
	1600x1200 @ 60H; 1680x1050 @ 60H							
	1920x1080 @ 60H	z						
Presets / user settings	Presets: 25; user se							
On screen display Control features		with digital user controls	(8 languages) g button (TIO / monitor mode),					
Control leatures			Menu button, Power button					
	Bottom: Volume u	ip button, Volume down	button					
Tiny-in-One Power On	can turn on both TI	i keyboard or pressing F O and Tiny (only some	Power button positioned on TIO Finy support, see compatible list)					
Side ports (TIO)			or M53 installed or USB 2.0					
	connected via USB		n a Timuia istallad an a DO is					
		ort is only available whe via USB upstream port	n a Tiny is istalled or a PC is					
Side ports (Tiny)	Side ports offered by	by installed Tiny (optiona	al)					
Rear ports			n port, one power connector					
3-in-1 Cable			er, USB [supports USB 3.1 Gen1 g to Tiny installed (optional)					
Camera		dual microphone for VC						
Internal Speaker	2 watt x2							
Security	Security keyhole fo compatible), locks offered by Tiny inst	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					
	J (11 /		·					

to	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	M910 / M710 / M900 / M700 /	M93/p Tiny,	Chromebox				
	M600 / M715 / M83 / M53 Tiny	M73 Tiny					
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) 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	TI	O with stand
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny			Dimensions	614.0 x 72.00	V 410 1	6140 x 20	9.0 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			(W x D x H mm / inch)	614.0 x 73.89 / 24.17 x 2.91			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	7.9	5 kg / 17.53 lb
Bezel Width Native resolution	Top / Side: 2mm, Bottom: 23.3mm 2560x1440	Mounting feature		Wall or desk moun meeting the VESA	FPMPMI® (100	extend ar 0mm mou	m or third-p unt)	party accessories
Multi-touch Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch	None 16:9 0.2331mm 109 dpi	Adjustable stand		Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; Pivot: clockwise -5° to 90°				
Brightness Contrast ratio Pixel response time	350 nits or cd/m² (typical) 1000:1 (typical) 14ms (default), over drive to 4ms, 6ms	Power supply Power consumpt	ion	170 watts adapter, 37 watts typical, 57			watts stand	by / suspend
Color gamut Anti-glare	99% sRGB Yes (25%)	Limited warranty		3-years, Product E Service (EMEA)	xchange Serv	ice (US a	and EMEA)	or Customer Carry-In
	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical	VESA-compliant		VESA DDC/CI. VE	SA DPMS-con	npliant		
Preset resolutions	640x350 @ 70Hz 640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz	Ergonomics Emission standa Environmental	rds	ISO 9241-307, TU' FCC Class B TCO 8.0, TCO Edg	ge 2.0, WEEE,	RoHS, E	NERGY ST	ʿAR® 7.0,
	800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz	Windows certification	ations	EPEAT™ Silver rati Windows 7 and Wi			C	
	1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz	Ship group		TIO 27 (Monitor), of and driver CD	detachable star	nd, powei	r adapter, p	ower cord, reference
	1280x1024 @ 60Hz, 72Hz, 75Hz	Accessories		For compatible acc	essories, plea	se go to I	http://smartf	ind.lenovo.com
	1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1600x1200 @ 60Hz, 70Hz, 75Hz			ThinkCentre Tiny	in One 07 Co.	maatibla	Motrix	
	1680x1050 @ 60Hz	Model		P320 / P330 / M920			p Tiny,	Chromebox
	1920x1080 @ 60Hz 2560x1440 @ 60Hz	ivious.		//910(x) / М710 / М9	` '	1	3 Tiny	Omomosox
Presets / user settings	Presets: 27; user settings: 25			M600 / M715 / M83	3 / M53 Tiny			
On screen display Control features	On screen display with digital user controls (8 languages) Ftont: Exit button, Left / Mode-switching button (TIO / monitor mode), Right / Brightness button, Enter / Menu button, Power button	Turn on TIO a Tiny together Alt + P on US	via	All mode	ls	All r	models	Not support
Tiny-in-One Power On	Bottom: Volume up button, Volume down button 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)	Turn on TIO a Tiny together	via	All mode	ls	TIO	models	All models
Side ports (TIO)	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 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	TIO Power Bu	utton					
Side ports (Tiny) Rear ports	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							
3-in-1 Cable	port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional)							
Camera	RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator							
Internal Speaker	2 watt x2							
Security	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)							
								Lenovo, Feb 201

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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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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.

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









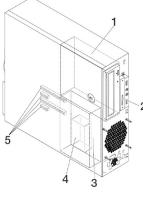




ThinkStation	P320	SFF	Platform	Specifications
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Components	Specification	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.0.00			
Chipset	Intel C236 Chipset						
Intel AMT	Intel Active Manag	ement	Technolo	gy 11 on her mode	Xeon models, ls		
	One Intel "Kabylak "Kaby Lake"						
Processor	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6 Xeon E3-1240 v6 Xeon E3-1240 v6 Xeon E3-1230 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7400 Core i3-7300 Core i3-7300 Core i3-7100	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 2C 2C	%3.8GHz/8 %3.7GHz/8 %3.7GHz/8 %3.3GHz/8 %3.3GHz/8 %3.6GHz/8 %3.5GHz/6 %3.4GHz/6 %34GHz/6M %4GHz/4M	MB/72W/D MB/73W/D MB/73W/D MB/73W/D MB/72W/D MB/73W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/51W/DD MB/51W/DD	DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 BR4-2400 BR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 BR4-2400 BR4-2400 BR4-2400		
	"Skylake"						
	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	C/3.5GHz/8 C/3.4GHz/8 C/3.3GHz/8 C/3GHz/8M C/3.4GHz/8 C/3.2GHz/6 C/2.7GHz/6	MB/80W/D MB/80W/D MB/80W/D MB/80W/D B/80W/DD MB/65W/D MB/65W/D MB/65W/D MB/51W/D	DR4-2133 DR4-2133 DR4-2133 R4-2133 DR4-2133 DR4-2133 DR4-2133		
Memory DIMM slots	4 DIMM slots, 2-ch	annel	(integrate	d memor	y 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.						
		3.0 x16			adapters. Up to two NVIDIA Quinic adapters:	Jadro	
	Adapter	Cores	Memory	Power	Connector		
Diameter annuality	NVS 310	48	1GB	19.5W	2xDP		
Discrete graphics	NVS 315	48	1GB	19.5W	2xDVI-I SL/2xDP		
	NVS 510	192	2GB	33.4W	4xmini DP		
	Quadro P400 Quadro P600	256 384	2GB 2GB	30W 40W	3xminiDP 4xminiDP		
	Quadro P1000	640	4GB	47W	4xminiDP		
Onboard drive controller		6.0Gl	b/s conne	ctors for o	optical and disk drives plus one)	
Drive Bays	One external 5.25'	bay, c	ne intern	al 3.5" ba lisk drive	y (see right). bays + 1 x 2.5" disk drive bay -	+ two	
Supporting disk drives	3.5" SATA HDD (7.2K 2.5" SATA SSD (6Gbs M.2 NVMe SSD, via P adapter) 2 Cle 2	56GB Opal	/512GB/512 /512GB Opa	d/2TB hybrid GB Opal/1TB Opal/2TB opal al/1TB Opal, via PCIe 3.0 x4 adapter, ne Memory, PCIe 3.0 x2	up	
Max internal storage	10TB (2 x 4TB 3.5	" HDD:	s + 1 x 2T	B 2.5" SS	SD) plus two 1TB M.2 NVMe S	SD	
Media reader	· · · · · · · · · · · · · · · · · · ·				der on selected models		
Power supply	210 watts with vari	able s	peed fan,	autosens	ing,		
Onboard Ethernet					supports Wake-on-LAN		
HD Audio	Realtek ALC662 c		aniet, inte	I IZ I ƏLIVİ,	Supports ware-on-LAIN		
TPM	Standard, TCG 2.0		liant				
1 1 141	Jordinadia, 100 Z.C	Comp	marit				

	,
Components	Specification
Front ports	Two USB 3.0, 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 3.0, 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 <u>www.thinkworkstations.com/isv-certifications/</u>



Drive Bays and PCIe Slots

2 2a, c a c.c c.c.c		
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	









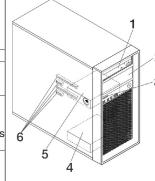


ThinkStation P32	20 Tower Platf	orm	Specif	fication	าร					
Components	Specification									
Chipset	Intel C236 Chipset									
Intel AMT	Intel Active Manage Intel Standard Man									
	One Intel "Kaby Lake" or "Skylake" processor as listed: "Kaby Lake"									
Processor	Xeon E3-1280 v6									
	"Skylake"									
	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 i5-6400 Core i3-6100	Xeon E3-1240 v5 4C/3.5GHz/8MB/80W/DDR4-2133 Xeon E3-1230 v5 4C/3.4GHz/8MB/80W/DDR4-2133 Xeon E3-1225 v5 4C/3.3GHz/8MB/80W/DDR4-2133 Xeon E3-1220 v5 4C/3GHz/8MB/80W/DDR4-2133 Core i7-6700 4C/3.4GHz/8MB/65W/DDR4-2133 Core i5-6500 4C/3.2GHz/6MB/65W/DDR4-2133 Core i5-6400 4C/2.7GHz/6MB/65W/DDR4-2133								
Memory DIMM slots	4 DIMM slots, 2-ch	annel	(integrate	ed memory	y controller in processor)					
Memory type/capacity	Up to 64GB ECC/n	on-EC	C (4 x 16	GB), DDF	R4-2400. UDIMM. "Skylak i7 and i5 processors can	e" not				
Intel HD Graphics in processor	in Xeon E3-12x5 ve processors. or Intel	6 proce HD 6 ics to s	essors, o 30 in Cor	r Intel HD e i7, i5, or	5 processors, or Intel HD 530 in Core i7, i5, or i3 60 i3 7000 processors. Worl ay, enables three display o	000 ks along				
	Two PCI Express 3 Up to two Quadro I	3.0 x16 P1000 ro P20	on 250 v 00, or up	vatts mode to one Qu	els. uadro P4000 on 400 watts	s models.				
	Adapter	Cores		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	-				
	Quadro P400	256	2GB	30W	3xminiDP					
	Quadro P600	384	2GB	40W	4xminiDP					
	Quadro P1000	640	4GB	47W	4xminiDP					
	Quadro P2000	1024	5GB	75W	4xDP					
	Quadro P4000	1792	8GB	105W	4xDP					
Onboard drive controller	SATA connector for	option	nal eSATA	A. RAID 0,		s one				
Drive Bays	Two external 5.25" Up to one 9mm op				ays (see right). ve bays plus two M.2 NVN	le SSD				
	3.5" SATA HDD (7.2K 6									
Supporting disk drives	2.5" SATA SSD (6Gbs) M.2 NVMe SSD, via PO adapter	Cle 2	56GB Opal	/512GB Opa	GB Opal/1TB Opal/2TB opal al/1TB Opal, PCIe 3.0 x4, up to ory, PCIe 3.0 x2	2; or				
Max internal storage	16TB (4 x 4TB 3.5'	' HDDs	s) plus 27	B (2 x 1T	B) M.2 NVMe SSD					
221 211 211 211 212 212 212	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		, p	\- \\ · ·	,					

9-in-1 card reader. Optional 29-in-1 card reader on selected models

Media reader

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 3.0, 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 3.0, 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 PCIe Slots

2	Bay 1 and	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 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.









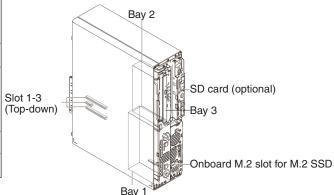


ThinkStation P330 SFF Platform Specifications

Components	Specification									
Machine Type	MT 30C7 for Transactional model and MT 30C8 for Relationship model. For configuration of all 30C7 EMEA and US models, please visit: http://psref.lenovo.com/Product/ThinkStation/ThinkStation_P330_SFF									
Form factor	8.4L mini-tower									
Dimensions	Height: 343.5 mm (13.5 in). Width: 92.5 mm (3.6 in). Depth: 305.6 mm (12 in)									
Weight	Maximum configuration: 13.23 lb (6.0kg)									
Processor	Up to one Intel Xeon E-2100 family processor, up to 80W, up to 6 cores at 3.7GHz, up to 3.8GHz with 4 cores, up to 12MB cache, DDR4-2666 memory speed. Or up to one 8th Intel Core family processor, i7, i5, or i3, up to 65W, up to 6 cores at 3.2GHz, up to 3.7GHz with 4 cores, up to 12MB cache, up to DDR4-2666 memory speed. Or up to one Intel Pentium G5400 via Special Bids, 58W, 2 cores at 3.7GHz, 4MB cache, DDR4-2400 memory speed									
Chipset	Intel C246 Chipset									
Memory	4 DIMM sockets. DDR4-2666. UDIMM. ECC and non-ECC are supported, but memory types cannot be intermixed									
Memory capacity	Up to 64GB with 4x 16GB, both ECC and non-ECC									
Memory protection	ECC with ECC UDIMM. Core i7 and i5 processors cannot support ECC UDIMM									
	Three PCIe 3.0 slots as following:									
Expansion slots	Slot 1 PCle 3.0 x16, full height, half length, links to CPU									
·	Slot 2 PCle 3.0 x1, full height, full length, links to PCH									
	Slot 3 PCIe 3.0 x16 (negotiable link width x4), full height, half length, links to PCH									
Graphics - Processor graphics	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD Graphics 630 in Core i7, i5, or i3 processors, or Intel UHD Graphics 610 in Pentium Gold G5400. Works along with discrete graphics to support multi-display, enables three display connectors (2x DP, 1x HDMI. HDMI is optional) on rear									
	Up to two PCle 3.0 x16 slots for discrete graphics adapter (Slot 1 and 3). Supports the following graphics adapters:									
Graphics - Discrete graphics card	Quadro P400 256 2GB GDDR5 30W 3x miniDP 2 Quadro P620 512 2GB GDDR5 40W 4x miniDP 2									
	Quadro P1000 640 4GB GDDR5 47W 4x miniDP 2									
Storage controllers	Integrated Intel SATA AHCI/RAID controller in chipset, 6Gbps SATA, RAID 0/1. Four onboard SATA ports for max 4 SATA HDD/SSD/ODD									
	Up to 3 bays with two disk bays and one slim optical bay:									
Internal storage	Bay 1 Primary 3.5" SATA bay									
bay	Bay 2 2.5" SATA bay (Optional)									
	Bay 3 9mm Slim ODD bay									
Disks	3.5" HDD supports up to 4TB each, 6Gbps SATA, 7.2K. 2.5" SSD supports up to 1TB each, 6Gbps SATA									
M.2 slot for SSD	Up to 3x M.2 SSD with one dedicated onboard M.2 slot plus two PCIe to M.2 adapters. PCIe to M.2 adapter uses slot 1 or 3. Supports RAID 0/1 with PCH, When used as RAID, M.2 SSD should be installed in onboard M.2 slot and slot 3. Up to one Optane memory per system; Optane memory must work with a HDD or SSD; Optane memory cannot supported on Pentium G5400 models									
M.2 SSD	M.2 SSD supports up to 1TB each, PCle 3.0 x4, NVMe, Opal. Optane memory supports 32GB, PCle 3.0 x2, NVMe, 3D Xpoint									
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									

Components	Specification
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 1 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	2x USB 3.1 Type-C. 1x COM. PS/2. 1x Parallel. 1x Thunderbolt. 1x IEEE1394. 1x HDMI. 1x Audio line-out Notes: HDMI needs Core, Pentium, or -G suffix Xeon processor
Temperature	Operating: 41 °F to 104 °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)
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:
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











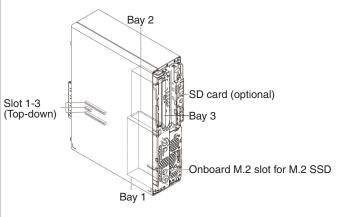


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

Components	Specification											
Form factor	8.4L mini-tower											
Dimensions	Height: 343.5 mm ((13.5 in). Wic	lth: 92	2.5 mm	(3.6 ir	n). Depth:	305.6 mm	(12 in)				
Weight	Maximum configuration: 13.23 lb (6.0kg)											
	Supports one of the											
	Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 (260W PSU needed)											
	Xeon E-2276G 6C/12T/3.8GHz/10MB/80W/DDR4-2666 260W PSO needs											
	Xeon E-2274G	4C/8T/4.0					,					
	Xeon E-2246G	6C/12T/3.					3					
	Xeon E-2244G	4C/8T/3.8					,					
	Xeon E-2236	6C/12T/3.					3					
	Xeon E-2234	4C/8T/3.6										
	Xeon E-2226G	6C/6T/3.4										
	Xeon E-2224G	4C/4T/3.5										
	Xeon E-2224	4C/4T/3.4										
Processor	Xeon E-2174G	4C/8T/3.8										
	Core i9-9900 Core i7-9700	8C/16T/3. 8C/8T/3.0										
	Core i7-9700	6C/12T/3.0					3					
	Core i5-9600	6C/6T/3.1					,					
	Core i5-9500	6C/6T/3.0										
	Core i5-9400	6C/6T/2.9	GHz/9	9MB/65	W/DDF	R4-2666						
	Core i5-8500	6C/6T/3.0										
	Core i3-9300	4C/4T/3.7										
	Core i3-9100	4C/4T/3.6										
	Core i3-8300	4C/4T/3.7										
	Core i3-8100 Pentium Gold G562	4C/4T/3.6 0 2C/4T/4.0										
Chipset	Intel C246 Chipset		GI IZ/	+1010/34	וטט/יייי	14-2400						
Memory Sockets	4 DIMM sockets with											
Memory Types	8GB/16GB DDR4-26			r 4GB/	9CB/16	CR DDB/	1-2666 LIDII	MM non-ECC				
Memory Capacity	64B with 4 x 16GB,						+-2000 ODII	VIIVI HOH-LCC				
Memory Protection	ECC on models with				VIIVI TIOTI							
Memory i Totection	Three PCIe 3.0 slo			ileoi y								
Expansion slots	Slot 1 PCIe 3.0 x16	· · · · · · · · · · · · · · · · · · ·										
	Slot 2 PCIe 3.0 x1,											
	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 Core i5 or i3 processors											
Processor graphics	Graphics 630 in Core i5 or i3 processors.											
0 .	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 graph	ics adapters	: alsc	rete gr	артпоз	adapter	Olot I alla	o). Gupporte				
Discrete graphics	Adapter Co	ores Memo	rv	Power	Cor	nectors	Max qty					
card		256 2GB GD		30W		miniDP	2					
		12 2GB GD		40W		miniDP	2					
	Quadro P1000 6	640 4GB GE	DR5	47W	4x	miniDP	2					
	Storage Controller		Type	Inte	rface	Dis	k Type	RAID				
Storage Controller	Onboard Intel RST		Std		6Gb/s		or SSD	0/1				
	Onboard Intel RST	PCIe RAID	Std	PCIe	NVMe	M.2 P	Cle SSD	0/1				
	Disk Type I	nterface RF	M	(Offering		Ма	x Qty				
	3.5" SATA HDD SA	ATA 6Gb/s 7.2	2K		3/2TB/4			1				
Storage Support		TA 6Gb/s 7.2	2K		OGB FII			2				
oto.ago oapport		ATA 6Gb/s		256GE	3/512GI	B/1TB		2				
	Optane Memory PC			05005	32GB	D/4TD	1, used wi	th HDD/SSD				
		Cle NVMe			3/512GI			3				
	Up to 3 bays with to	wo disk bays	and	one sli	m optic	al bay:						
	Bay 1 Prima	ary 3.5" SATA	bay									
Storage bay		SATA bay (Or		al)								
_		Slim ODD b		,								
	,	2 SSD (1 onb		2 via P	Cle to I	M 2 adant	er)					

Components	Specification
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 1 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 PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.0. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor
Temperature	Operating: 41 °F to 104 °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)
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:	

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	
	1L. Optional VE	SA m	ount brac	ket kit, sup	ports V	ESA 75mm and 1	00mm.	Chipset	Intel Q370 Chipset	
Form factor	Optional floor s Optional tool-le	tand f	or vertica	I orientatior	٦.			Memory	2 DIMM sockets. DDR4-2666. SoDIMM. Non-ECC	
	Optional dust fi		assis upe						One PCIe slot via specific riser card:	
Dimensions	Height: 179 mm (7.0 in). Width: 36.5 mm (1.437 in). Depth: 182.9 mm (7.2 in)				in). Depth: 182.9 r	nm (7.2 in)		PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card:		
Weight	Maximum configuration: 3.08 lb (1.4kg)								PCIe 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter	
Supported TIO	Tinv-in-One 23 (MT: 10DQ).							Graphics	65W or 62W processor models supports processor graphics only. 35W processor models come with processor graphics plus a discrete graphic adapter	
monitors	Tiny-in-One22 Tiny-in-One22								r Integrated Intel UHD Graphics 630. Works along with discrete graphics to	
	Tiny-in-One24	Gen3	(MT: 10C	(Y).				graphics	support multi-display One of the following discrete graphics cards on 35W processor models:	
	Tiny-in-One24							Ohim Diameter	Adapter Cores Memory Pow- Connectors	
Recommended monitors	and productivity		Ininkvis	ion P series	s monit	ors for best displa	y performance	Graphics - Discrete graphics card	er	
	Supports one of		ollowing:						Quadro P620 512 2GB GDDR5 40W 4x miniDP	
	Processor	Coros	Threads	Base	Cache	TDD Memory	Processor		Quadro P1000 640 4GB GDDR5 47W 4x miniDP Integrated Intel SATA AHCI controller in chipset, 6Gbps SATA, one onboard	
	<u> Number</u>		illeaus	Frequency		Types	Graphics Intel UHD	Storage controllers	SATA port for 2.5" HDD	
	Core i9-9900T	8	16	2.1GHz	16MB	35WDDR4-2666	Graphics 630	Internal storage bay	Up to one 2.5" HDD	
	Core i7-9700T	8	8	2.0GHz	12MB	35WDDR4-2666	Intel UHD Graphics 630	Disks	2.5" HDD supports up to 1TB, 6Gbps SATA, 7.2K or 5.4K	
	Core i5-9600T	6	6	2.3GHz	OMB	35WDDR4-2666	Intel UHD	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	
		-	-				Graphics 630 Intel UHD	M.2 SSD	M.2 2280 SSD supports up to 1TB each, PCle 3.0 x4, NVMe, optional Opal.	
	Core i5-9600	6	6	3.1GHz	9MB	65WDDR4-2666	Graphics 630	IVI.Z GOD	M.2 2242 SSD supports up to 128GB, PCle 3.0 x2, NVMe	
	Core i5-9500T	6	6	2.2GHz	9MB	35WDDR4-2666	Graphics 650	Optane memory	Up to one 16GB Optane memory per system. Optane memory must work with a 2.5" HDD	
	Core i5-9500	6	6	3.0GHz	9MB	65W DDR4-2666	Intel UHD Graphics 630		One dedicated M.2 2230 slot for optional Wi-Fi card, supports one of the following:	
	Core i5-9400T	6	6	1.8GHz	9MB	35WDDR4-2666	Intal LILID	M.2 slot for Wi-Fi and Bluetooth	Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps.	
	Core i5-9400	6	6	2.9GHz	9MB	65WDDR4-2666	Intel UHD Graphics 630	and bluetooth	Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps.	
	Core i3-9320	4	4	3.7GHz	8MB	62WDDR4-2400	Intal LIUD	Wi-Fi antenna	Note: Wi-Fi card, or specific functions of Wi-Fi- card may not be supported in some countries Optional Tiny 2.4GHz/5GHz SMA antenna kit	
	Core i3-9300T	4	4	3.2GHz	8MB	35WDDR4-2400		Optical	Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW. VESA mount is required	
	Core i3-9300	4	4	3.7GHz	8MB	62WDDR4-2400	Intel UHD	Media reader	None. Using USB adapter	
Processor	Core i3-9100T	4	4	3.1GHz	6MB	35WDDR4-2400	Graphics 630 Intel UHD Graphics 630	Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional Intel i350-T4 for 4x GbE ports, using PCle slot	
	Core i3-9100	4	4	3.6GHz	6MB	65WDDR4-2400	Intel UHD Graphics 630	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Chassis intrusion switch. Optional Kensington lock	
	Core i7-8700T	6	12	2.4GHz	12MB	35WDDR4-2666	Intel UHD Graphics 630	Intel vPro	Supports vPro on models with the following processors: Core i7-8700T, Core	
	Core i7-8700	6	12	3.2GHz	12MB	65WDDR4-2666	Intel UHD Graphics 630	Technology	i7-5700, Core i5-8600T, Core i5-8600, Core i5-8500T, Core i5-8500. vPro also requires Wireless-AC 9560 if Wi-Fi is needed	
	Core i5-8600T	6	6	2.3GHz	9MB	35WDDR4-2666	Intel UHD Graphics 630	Systems management	Intel Active Management Technology 12 on vPro models, Intel Standard Manageability on other models	
	Core i5-8600	6	6	3.1GHz	9MB	65WDDR4-2666	Intel UHD Graphics 630	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	
	Core i5-8500T	6	6	2.1GHz	9MB	35WDDR4-2666	Intel UHD Graphics 630	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec	
	Core i5-8500	6	6	3.0GHz	9MB	65WDDR4-2666	Intel UHD Graphics 630	Front standard ports	1x USB 3.1 Gen 1 Type A (charging). 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x Combo jack	
	Core i5-8400T	6	6	1.7GHz	9MB	35WDDR4-2666	Intel UHD Graphics 630	Rear standard ports	2x USB 3.1 Gen 2 Type A. 2x USB 3.1 Gen 1 Type-A. 1x RJ-45. 1x DP. 1x HDMI	
	Core i5-8400	6	6	2.8GHz	9MB	65WDDR4-2666	Intel UHD Graphics 630		Up to two optional rear ports via punch out cable.	
	Core i3-8300T	4	4	3.2GHz	8MB	35WDDR4-2400	Intel UHD Graphics 630	Ontional	Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DP function.	
	Core i3-8300	4	4	3.7GHz	8MB	62WDDR4-2400	Intel UHD Graphics 630	Optional rear ports - via punch out cable	1x COM. 1x VGA. 1x DP.	
	Core i3-8100T	4	4	3.1GHz	6MB	35WDDR4-2400	Intel UHD Graphics 630		1x HDMI. Port 2 supports one COM	
	Core i3-8100	4	4	3.6GHz	6MB	65WDDR4-2400	Intel UHD Graphics 630		I OIL & SUPPOILS OILE OOM	

ThinkStation P330 Tiny Platform Specifications - II of II

Components	Specification
Optional rear ports - via punch out cable	Up to two optional rear ports via punch out cable. Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DP function. 1x COM. 1x VGA. 1x DP. 1x HDMI. Port 2 supports one COM
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 Platform Specifications

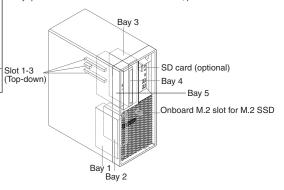
Components	Specification								
Machine Type	MT 30C5 for Transactional model and MT 30C6 for Relationship model. For configuration of all 30C5 EMEA and US models, please visit: http://psref.lenovo.com/Product/ThinkStation/ThinkStation_P330_Tower								
Form factor	18L Tower								
Dimensions	Height: 376 mm (14.	8 in). \	Nidth: 165 mr	n (6.5 i	n). Depth: 328 mm (12.9 in)				
Weight	Maximum configurat				, , ,				
Processor	Up to one Intel Xeor 12MB cache, up to I Or up to one 8th Inte at 3.7GHz, up to 12N	E fan DR4- I Core IB cae Intium	nily processor 2666 memory family proces the, up to DD Gold G5400	, up to r speed ssor, i7 R4-266 via Spe	, i5, or i3, up to 95W, up to 6	cores			
Chipset	Intel C246 Chipset	. 100 11	iomory opece						
Memory		R4-26	66. UDIMM. Entermixed	CC ar	d non-ECC are supported, b	out			
Memory capacity	Up to 64GB with 4x			d non-	ECC				
Memory protection					ors cannot support ECC UD	IMM			
	Three PCIe 3.0 slots								
Evanacion alata	Slot 1 PCIe 3.0 x16,	full he	eight, half leng	ıth, link	s to CPU				
Expansion slots	Slot 2 PCle 3.0 x1, f	ull hei	ght, full length	, links	to PCH				
	Slot 3 PCIe 3.0 x16	(nego	iable link widt	h x4),	ull height, half length, links t	o PCH			
Graphics - Processor graphics	Graphics 630 in Core i7, i5, or i3 processors, or Intel UHD Graphics 610 in Pentium Gold G5400. Works along with discrete graphics to support multi-display, enables three display connectors (2x DP, 1x HDMI. HDMI is optional) on rear Up to two PCIe 3.0 x16 slots for discrete graphics card (Slot 1 and 3). Supports the								
	following graphics ac	dapter	s:						
	Adapter Quadro P400	Cores 256		Power 30W	Connectors 3x miniDP	Max qty 2			
Graphics - Discrete	Quadro P620	512	2GB GDDR5 2GB GDDR5	40W	4x miniDP	2			
graphics card	Quadro P1000	640	4GB GDDR5	47W	4x miniDP	2			
	Quadro P2000		5GB GDDR5	75W	4x DP	2			
	Quadro P4000		8GB GDDR5		4x DP	1			
Storage controllers	Notes: Quadro P4000 and Integrated Intel SATA Four onboard SATA	AHC	I/RAID contro	ller in d	chipset, 6Gbps SATA, RAID (0/1/10/5			
	Up to five bays with four disk bays plus one slim optical bay, supports up to 3x 3.5" HDD plus 1x 2.5" SSD, or 4x 2.5" SSD								
	Bay 1 Primary disk	nav 3	5" or 2.5"						
				e whe	n 2nd Quadro P2000 is used				
	Bay 3 Secondary di								
Internal storage				e follo	wina.				
bay	Bay 4 5.25" Flex bay, supports one of the following: • Flex module for optional front eSATA/Thunderbolt/IEEE1394								
	3rd disk bay, 3.5" or 2.5", removable, via Front Access Storage Enclosure, using SATA 4 connector as eSATA mode								
			or 2.5",via 5.2						
					closure, also occupies slot 1	or 3			
	Bay 5 9mm Slim OE				•				
Disks	3.5" HDD supports u 2.5" SSD supports u	ip to 4	TB each, 6Gb						

Components	Specification
M.2 slot for SSD	Up to 3x M.2 SSD with one dedicated onboard M.2 slot plus two PCle to M.2 adapters. PCle to M.2 adapter uses slot 1 or 3. Supports RAID 0/1 with PCH, When used as RAID, M.2 SSD should be installed in onboard M.2 slot and slot 3. Up to one Optane memory per system; Optane memory must work with a HDD or SSD; Optane memory cannot supported on Pentium G5400 models
M.2 SSD	M.2 SSD supports up to 1TB each, PCIe 3.0 x4, NVMe, Opal. Optane memory supports 32GB, PCIe 3.0 x2, NVMe, 3D Xpoint
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 1 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 front ports (on flex module)	2x Thunderbolt (USB Type-C), one of two ports supports video-out. 1x eSATA. 1x IEEE1394
Optional rear ports	2x USB 3.1 Type-C. 1x COM. PS/2. 1x Parallel. 1x Thunderbolt. 1x IEEE1394. 1x HDMI. Notes: HDMI needs Core, Pentium, or -G suffix Xeon processor
Temperature	Operating: 41 °F to 104 °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)
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:	

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















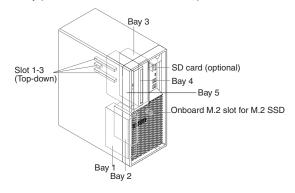
ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - I of II

Components	Specification			Components	Specification				
Form factor	18L Tower				Storage Controller Type Interface Disk Type RAID				
Dimensions		8 in). Width: 165 mm (6.5 in). Depth: 32	8 mm (12 9 in)	Storage Controller					
		, , , , ,	0 111111 (12.5 111)	-	Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1				
Weight	Maximum configurati	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			Disk Type Interface RPM Offering Max Qty				
		following processors:			3.5" SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB 3				
	Xeon E-2286G	6C/12T/4.0GHz/12MB/95W/DDR4-2666			2.5" SATA HDD SATA 6Gb/s 7.2K 500GB FIPS 4				
	Xeon E-2278G	8C/16T/3.4GHz/16MB/80W/DDR4-2666		Storage Support	2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB 4				
	Xeon E-2276G	6C/12T/3.8GHz/12MB/80W/DDR4-2666			1				
	Xeon E-2274G	4C/8T/4.0GHz/8MB/83W/DDR4-2666	-		Optane Memory PCIe NVMe 32GB used with HDD/SSD				
	Xeon E-2246G Xeon E-2244G	6C/12T/3.6GHz/12MB/80W/DDR4-2666 4C/8T/3.8GHz/8MB/71W/DDR4-2666	 		M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB 3				
	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							
	Xeon E-2186G	6C/12T/3.8GHz/12MB/95W/DDR4-2666	400W PSU needed		Bay 3 Secondary disk bay, 3.5" or 2.5"				
Processor	Xeon E-2174G	4C/8T/3.8GHz/8MB/71W/DDR4-2666		Storage Bays	Bay 4 5.25" Flex bay, supports one of the following:				
1 10000001	Pentium Gold G5620				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		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 Core i5-9600	6C/6T/3.7GHz/9MB/95W/DDR4-2666	400W PSU needed		M.2 3x M.2 SSD (1 onboard, 2 via PCle to M.2 adapter)				
	Core i5-9500	6C/6T/3.1GHz/9MB/65W/DDR4-2666 6C/6T/3.0GHz/9MB/65W/DDR4-2666		Media reader	Optional SD card reader on most models				
	Core i5-9400	6C/6T/2.9GHz/9MB/65W/DDR4-2666		Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports				
	Core i5-8500	6C/6T/3.0GHz/9MB/65W/DDR4-2666			Wake-on-LAN. Optional PCIe ethernet adapters are available				
	Core i3-9300	4C/4T/3.7GHz/8MB/62W/DDR4-2400		WLAN + Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2,				
	Core i3-9100	4C/4T/3.6GHz/6MB/65W/DDR4-2400		WEAR + 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		0	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	Optional chassis intrusion switch, e-loack, cable lock, Kensington lock, and				
Chipset	Intel C246 Chipset				pad lock Supports Intel vPro on Xeon models.				
Memory Sockets	4 DIMM sockets with 2	2 channels		Intervero	vPro also requires Wireless-AC 9560 if Wi-Fi is needed				
Memory Types	8GB/16GB DDR4-266	66 UDIMM ECC or 4GB/8GB/16GB DDR4	-2666 UDIMM non-ECC		Intel Active Management Technology 12 on Xeon models,				
Memory Capacity	64B with 4 x 16GB, bo	oth UDIMM ECC or UDIMM non-ECC		Intel AMT	Intel Standard Manageability on other models				
Memory Protection	ECC on models with U	JDIMM ECC memeory]	US models comes with 3-year limited onsite service with 9x5/NBD.				
	Three PCIe 3.0 slots	as following:		Base warranty	1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs				
	Slot 1 PCIe 3.0 x16,	full height, half length, links to CPU		HD Audio	Intel HD Audio interface with Realtek ALC233 Codec				
Expansion slots		ull height, full length, links to PCH		Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1				
		(negotiable link width x4), full height, ha	alf length links to PCH	From ports	Type-C. 1x Mic-in. 1x Combo jack				
		Graphics P630 in -G suffix Xeon proce		1	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP.				
	Graphics 630 in Core	e i7, i5, i3, or Pentium processors.	ssors, or litter of iD	Rear ports	1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor				
Processor graphics	Works along with dis	screte graphics to support multi-display,	enables three rear	Optional front	·				
	display connectors (2	2 DP standard, 1 DP or HDMI optional)		ports (on flex	2x Thunderbolt (USB Type-C), one of two ports supports video-out.				
	Up to two PCIe 3.0 x	16 slots for discrete graphics card (Slot	t 1 and 3). Supports the	module)	1x eSATA. 1x IEEE1394				
	following graphics ac				Supports the following via cable:				
	Graphics	Memory Power Connector	Max Qty	Optional rear	1x COM, 1x Parallel, 2x PS/2, 1x DP or 1x HDML 2x USB 2.0				
		2GB GDDR5 30W 3x miniDP	2	ports	Supports the following via PCIe adapter:				
Diagrata Crambias		2GB GDDR5 40W 4x miniDP	2		4x COM. 2x USB 3.1 Type-C. 2x USB 3.0. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor				
Discrete Graphics Offering		4GB GDDR5 50W 4x miniDP	2		Operating: 41 °F to 104 °F (10 °C to 35 °C)				
Chomig		GGB GDDR5 75W 4x DP	2	Temperature	Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)				
		GB GDDR5X 75W 4x DP	2	Tomporature	Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)				
		GGB GDDR5X 180W DVI-D DL + 4x DP	1						
		BGB GDDR6 160W 3x DP, 1x VirtualLink							
	Note: 2x Quadro P2000, Qu	uadro P5000, or Quadro RTX 4000 needs 400W PS	U						

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

Form factor 33l. Tower	Dimensions 168 Weight Ma Weight Ma Up Processor Family Processor Sockets 1x Chipset Inte Memory Sockets 8D Memory Types DD Memory Capacity 256 Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	5mm/6.5" W x 4 aximum configure to one 140W li Up to 18 cores Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 ell C422 Chipsee DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 8 H0 uadro P400 uadro P600 uadro P600 uadro P1000 uadro P1000 uadro P1000 uadro P2000	ration: 5. ntel Xeo at 2.3 G with 4 co 3 cache 66 mem et with 4 ch MM 2GB RD 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	2.91 lb (24n W family Hz hz family Hz hz family Hz famil	eight, fi height, eight, height, li leight, height, height, height, height, height, height he	sor: ull length, full lengtl alf length full lengtl n, 25W alf length Con 8xm	25W, op n, 75W, o l, 25W, o n, 75W, o l, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Meight	Weight Ma Up Processor Family Processor Sockets 1x Chipset Inte Memory Sockets 8D Memory Types DD Memory Capacity 25f Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	aximum configure to one 140W live to one 140W live to 18 cores. Up to 4.0 GHz vup to 4.0 GHz vup to 24.75 MB up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets was DR4-2666 RDIM 6GB with 8 x 32 CC ot 11 (CPU) Fot 2 (CPU) Fot 5 (CPU) Fot 6 (PCH) Fot 6 (PCH) Fot 6 (PCH) Fot 6 (PCH) Fot 7 (PCH) Fot 7 (PCH) Fot 7 (PCH) Fot 8 (PCH) Fot 8 (PCH) Fot 9 (PCH)	ration: 5. ntel Xeo at 2.3 G with 4 co 3 cache 66 mem et with 4 ch MM 2GB RD 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	2.91 lb (24n W family Hz hz family Hz hz family Hz famil	eight, fi height, eight, height, li leight, height, height, height, height, height, height he	sor: ull length, full lengtl alf length full lengtl n, 25W alf length Con 8xm	25W, op n, 75W, o l, 25W, o n, 75W, o l, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Up to one 140W Intel Xeon W Iamily processor:	Processor Family Processor Sockets Interpretation Processor Sockets Chipset Interpretation Memory Sockets Memory Types Memory Capacity Slo Slo Slo Slo Slo Slo Slo Sl	or to one 140W li Up to 18 cores. Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC or to 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P600 uadro P620 uadro P1000 uadro P1000 uadro P1000 uadro P2000	ntel Xeo at 2.3 G with 4 cc 3 cache 66 mem et with 4 ch MM 2GB RD 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	annels IMMs O x8, full h O x16, full h O x16, full h O x4, full h O x4, full h O x4, full h O x4, full h O x4, full h O x8, full h O x8, full h O x8, full h	eight, fi height, eight, height, ll length eight, h	ull length, full length alf length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Processor Family Up to 4.0 GHz with 4 cores	Processor Family Processor Sockets Ix Chipset Interpretation Memory Sockets Memory Types Memory Capacity Sic Sic Sic Sic Sic Sic Sic Sic Sic Si	Up to 18 cores Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P620 uadro P1000 uadro P1000 uadro P2000	at 2.3 G with 4 cc 3 cache 666 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0 PCIE 3	Annels IMMs O x8, full h O x16, full h O x4, full h O x4, full h O x4, full h O x4, full h D x4, full h O x4, full h O x4, full h O x4, full h	eight, fi height, eight, h height, ll Il length eight, h Power 68W 30W	ull length, full length alf length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Processor Family Up to 4.0 GHz with 4 cores Up to 24.75 MB cache Up to DDR4-2666 memory speed Up to DDR4-2666 memory speed Up to DDR4-2666 memory speed Up to DDR4-2666 memory speed Up to DDR4-2666 memory speed Up to DDR4-2666 memory Speed Up to DDR4-2666 memory Speed Up to DDR4-2666 memory Speed Up to DDR4-2666 memory Speed Up to DDR4-2666 RDIMM Up to DDR4-266	Processor Family Processor Sockets Ix Chipset Interpretation Memory Sockets Memory Types Memory Protection Expansion slots Sic Sic Sic Sic Sic Sic Sic Sic Sic Si	Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC tot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 7 (PCH) F ot 8 10 uadro P400 uadro P620 uadro P1000 uadro P1000 uadro P2000	with 4 cc 3 cache 66 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0	annels IMMs O x8, full h O x16, full h O x4, full h O x4, full h Height, fu O x4, full h Bemory B DDR3 B GDDR5 B GDDR5	eight, fi height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Processor Sockets	Processor Sockets 1x Chipset Interpretation Interpr	Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	et vith 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0 PCIE 3.	annels IMMs 0 x8, full h 0 x16, full h 0 x16, full h 0 x16, full h 1 x16, full h 1 x16, full h 1 x16, full h 2 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 4 x4, full h	eight, fi height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
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Memory Sockets S DIMM sockets with 4 channels	Memory Sockets 8 E Memory Types DD Memory Capacity 256 Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 78 ouadro P400 uadro P600 uadro P600 uadro P1000 uadro P2000	vith 4 ch	IMMs) x8, full h) x16, full h) x4, full h) x16, full h height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Memory Types DDR4-2666 RDIMM Memory Capacity 2568 with 8 x 32GB RDIMMs ECC Slot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x16, full height, half length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x16, full height, half length, 25W, open ended Slot 5 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Rother 1	Memory Types DD Memory Capacity 256 Memory Protection EC Slc Slc Slc Slc Slc Slc Slc Slc Slc Slc	DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 7 (PCH) F ot 7 (PCH) F ot 8 (PCH) F ot 8 (PCH) F ot 9 (PCH)	PCIe 3.0 PCIE 3.0 PCI	IMMs) x8, full h) x16, full h) x4, full h) x16, full h height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Memory Capacity Capacity ECC	Memory Capacity 256 Memory Protection EC Slc Slc Slc Slc Slc Slc Slc Slc Slc Slc	6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 5 F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	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	0 x8, full h 0 x16, full h 0 x4, full h 0 x16, full height, full h 1 x4, full h 1 lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
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Stot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x16, full height, full length, 75W, open ended Slot 4 (CPU) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x46, full height, full length, 75W, double-width Slot 5 PCI, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, half length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended PCIe 3.0 x46, full height,	Expansion slots Slot Slot Slot Slot Slot Slot Slot Slot	ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 5 F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 4G 2GE 2GE 4GE) x16, full) x4, full h) x16, full height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
Solicity Poles 3.0 x16, full height, full length, 75W, double-width	Expansion slots Slot Slot Slot Slot Slot Slot Slot Slot	ot 2 (CPU) Fot 3 (PCH) Fot 4 (CPU) Fot 5 Fot 6 (PCH) Fraphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 4G 2GE 2GE 4GE) x16, full) x4, full h) x16, full height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended		
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Slot 5 PCI, full height, full length, 25W Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended	Sic Sic Sic Sic Sic Sic Sic Sic Sic Sic	ot 5 Frot 6 (PCH) Fraphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCI, full PCIe 3.0 W 4G 2GE 2GE 2GE 4GE	height, fu 0 x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	ll length eight, h Power 68W 30W	n, 25W alf length Coni 8xm	, 25W, o nector ini DP	pen ended		
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Quadro P6000 24GB GDDR5X 250W DVI-D DL+4xDP 1 Quadro RTX 4000 8GB GDDR6 160W 3xDP, 1xVirtualLink 2 Quadro RTX 5000 16GB GDDR6 265W 4xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 265W 4xDP, 1xVirtualLink 1 Quadro RTX 8000 44GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP 1 1	Storage Controller Divining the state of th									
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PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type									<u> </u>	
Bay Type Maximum Drives Qty M.2 slot 9x M.2 ssD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following:	M.	.2 PCle SSD P	Cle NV	Me	256GB/	/512GB/1				
Bay Type Maximum Drives Qty 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 1 x flex module for the following options: Tray 1: 9.0mm optical	PC	Cle AIC SSD P	Cle NV	Me		480GB				
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 1 x flex module for the following options: Tray 1: 9.0mm optical								ust	eu)	
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 1 x flex module for the following options: Tray 1: 9.0mm optical			000 (0	ll -						
2x half-height optical drives 2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure	IMI						adapter)			
2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1x flex module for the following options: Tray 1: 9.0mm optical		• 2x ha	ays. Oup Ilf-height	optical dr	ives	j.				
Storage Bays Flex Bay Flex Bay 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1x flex module for the following options: Tray 1: 9.0mm optical		• 2x 5.2	25" 9.0m	nm optical	drives					
1x flex module for the following options: Tray 1: 9.0mm optical	Ctorono Dour									
Tray 1: 9.0mm optical	Storage Bays Fle						ccess Sto	orage Enclosu	re	
Tray 2: 15-in-1 LISB 3.0 reader, 2x Thunderholt, or 4-digit diagnostic display										
		Tray 1: 9.0mm optical								
Port 1 and 2: Front USB 3.0 Type-C or eSATA		Tray 1								
 2x M.2 SSD with 2x Front Removable Drive Enclosures Disk bay Up to 4x 3.5" or 2.5" disks with 4 disk bays (2 bays standard, 2 bays optional) 	Dia	Tray 1 Tray 2 Port 1	7 5 5 1 1 1						(e optional)	
[Disk day lop to 4x 3.3 of 2.3 disks with 4 disk days (2 days standard, 2 days optional)]		Tray 1 Tray 2 Port 1 • 2x M.			• vvili 4 (JION DAVS		iailualu, Z Day	ο υμιιυπαι)	

	Max Storage	PCIe AIC SSD. All HDD: 36TB using 6x 3.5" HDD	HDD/6x 2.5" SATA disks/4x 2.5" SAS HDD + 1x SSD, 9x M.2 SSD, and 1x PCIe AIC SSD						
	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 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.0 reader on						
	Network interfaces	Integrated one gigabit ethernet (Intel is ethernet or wireless adapters are avai	219LM), supports Wake-on-LAN. Optional PCIe lable						
	WLAN + Bluetooth	867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to						
	Security features	1.2 via UEFI setting. Optional access	ed Platform Module, TCG 2.0 compliant, switch to panel lock, Kensington lock, and pad lock						
	Intel vPro	Intel vPro technology supported. vPro	requires Wireless-AC 8265 if Wi-Fi is needed						
	Intel AMT	Intel Active Management Technology	11						
	Diagnostic	with Lenovo PC Diag-nostics for Andro display on flex module	n Diagnostics for Windows. Photo-audio transfer oid and iOS. Optional front 4-digit diagnostic						
	Base warranty	1 or 3-year limited onsite service with 9x5/NBD							
	HD Audio	Realtek ALC662 codec							
	Front ports		ng), 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), 2 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 PCle adap Internal: 1x internal USB 3.0 port	3 3.1 gen 1 ter, USB 3.1 gen 2. One 15W, one 5W						
		Temperature - operating Temperature - storage (no package) Temperature - storage (with package)	50 °F to 95 °F (10 °C to 35 °C) 14 °F to 140 °F (-10 °C to 60 °C)						
	Environmental	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)						
	specification	Humidity - operating	, , ,						
		, , ,	10%~80%, non-condensing						
		Humidity - storage (with package)	10%~90%, non-condensing						
	Environmental Certifications	RoHS-compliant. GREENGUARD. EP on model 30BE0008US and 30BE000	EAT Silver rating. ENERGY STAR 6.1 qualified 09US						
╝	ISV certifications	Please visit www.thinkworkstations.co	om/isv-certifications/						
-1		,							

- 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

	i ozoo i iatio		роспп	Juli J						
Form factor	25L Tower									
Dimensions	175mm/6.89" W x 4	26mm/	16.77" D	x 376m	m/14.8" H	(with feet	:)			
Weight	Maximum configura									
	Up to one 140W Int	el Xeor	n W family	proces	sor:					
	• Up to 18 cores at									
Processor Family	• Up to 4.0 GHz wi		res							
	 Up to 24.75 MB (Up to DDR4-266 		nrv sneed	ı						
Processor Sockets	1x FCLGA2066	o mem	лу эреес						\dashv	
Chipset	Intel C422 Chipset								\dashv	
Memory Sockets	4 DIMM sockets wit	h 4 cha	nnels						\dashv	
Memory Types	DDD4 9666 DDIMM									
Memory Capacity	128GB with 4 x 320		MMe						\dashv	
Memory Protection	ECC	וטוו טג	IVIIVIO							
Welliory I Totection		2020	v16 full	hoight	full length	75\//			\dashv	
							an andad			
Expansion slots							en ended			
					full length					
	Slot 4 (PCH) PC	Jie 3.0	x4, full h		nait length	, 25W, op	oen ended			
	Graphics		mory	Power		ector	SLI / NVlink	Max Qty		
	NVS 810		DDR3	68W	8xmi			1		
Discrete Graphics Offering	Quadro P400	2GB GDDR5		30W	3xmi			2		
	Quadro P600	2GB GDDR5 2GB GDDR5		45W	4xmi			2		
	Quadro P620 Quadro P1000		GDDR5 GDDR5	40W 50W	4x m	iniDP		2		
	Quadro P2000		GDDR5	75W	4x1111			2		
	Quadro P4000 8GB GDDR5 120W 4xDP					2				
	Quadro P5000 16GB GDDR5X 180W DVI-D DL+4xDP 1									
	Quadro RTX 4000				3xDP, 1x\		(1		
	Storage Controller									
	Onboard Intel RST			ATA 6Gb	o/s	0/1/10/5	;			
Storage Controller	9440-8i PCle	Opt	SAS 120	ab/s, SA	TA 6Gb/s	0/1/10/5	i			
	NVMe Basic	Opt		Cle NVI		0/1/10				
	NVMe for Intel SSE	Opt	P	Cle NVI	Лe	0/1/10/5	i		_	
	Disk Type II	nterface	RPM		Offering		Max	Qtv		
	3.5" SATA HDD SA			1TB	/2TB/4TB/	6TB		1		
Storage Support	2.5" SATA HDD SA	TA 6Gb	o/s 7.2K		B/500GB			4		
	2.5" SATA SSD SA				/512GB/1			1	-	
	M.2 PCIe SSD PC	le NVN	/le	256GB	/512GB/17	B/2TB		5	_]	
	Bay Type			Maxi	mum Drive	es Qty				
	M.2 slot 5x M.2 S	SD (2 o	nboard, 3	3 via PC	le to M.2 a	adapter)			ا	
	2 flex bay				g:					
			optical dr m optical						- -	
					2x 3.5"/2.5	S SATA S	SD/HDD			
Storage Bays	1 2 5"						rage Enclosu	re		
- '	• 1x flex	module	for the fo				0			
			optical		o = 1		4 11 11 11			
							4-digit diagno	stic display		
					oe-C or eS ovable Dri		ures			
	Disk bay Up to 2x					TO LITITION				
				5.10	, -					

_	Max Storage	Supports up to 5x M.2 SSD + 4x 3.5" All HDD: 24TB using 4x 3.5" HDD							
┪		All SSD: 18TB using 4x 2.5" SATA SSI							
┨	Power supply	One fixed 500W, autosensing, 92%, 80							
	Media reader	flex module	els. Optional UHS-II 15-in-1 USB 3.0 reader on						
	Network interfaces	Integrated one gigabit ethernet (Intel iz ethernet or wireless adapters are avai	219LM), supports Wake-on-LAN. Optional PCIe lable						
4	WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps							
4	Security features	1.2 via UEFI setting. Optional access p	d Platform Module, TCG 2.0 compliant, switch to banel lock, Kensington lock, and pad lock						
4	Intel vPro	Intel vPro technology supported. vPro	requires Wireless-AC 8265 if Wi-Fi is needed						
4	Intel AMT	Intel Active Management Technology	11						
1	Diagnostic	ThinkStation Diagnostics for Windows. 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	2x USB 3.0, microphone (3.5mm), headphone (3.5mm)							
	Rear ports	2x USB 2.0, 4x USB 3.0, 1x RJ-45, 3x PS/2	analog audio ports (line-in, line-out, mic-in), 2x						
	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 PCle adap Internal:	3 3.1 gen 1						
4		 1x internal USB 3.0 port 							
\parallel		Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)						
1		Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)						
1	Environmental	Temperature - storage (with package)	-40 °F to 140 °F (-40 °C to 60 °C)						
╣	specification	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)						
-		Humidity - operating	10%~80%, non-condensing						
1		Humidity - storage (with package)	10%~90%, non-condensing						
	Environmental Certifications	RoHS-compliant. GREENGUARD. EP on model 30BX0008US and 30BX000	EAT Silver rating. ENERGY STAR 6.1 qualified 9US						
	ISV certifications	Please visit www.thinkworkstations.co	Please visit www.thinkworkstations.com/isv-certifications/						

Note:
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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

	F120 Flationi	· Opt		4110110						
Form factor	36L Tower									
Dimensions	175mm/6.89" W x 48	175mm/6.89" W x 485mm/19.1" D x 446mm/17.6" H (with feet)								
Weight	Maximum configuration: 52.25 lb (23.7kg)									
Processor Family	Gold, or Platinum: Up to 24 cores at Up to 3.6 GHz wit Up to 33 MB cach	Up to two 150 W Gen 1 or Gen 2 Intel Xeon Scalable family processors, Bronze, Silver, Gold, or Platinum: Up to 24 cores at 2.1 GHz Up to 3.6 GHz with 4 cores Up to 33 MB cache Up to DDR4-2933 memory speed								
Processor Sockets	2x FCLGA3647	IIIeIIIO	ry speed	<i>1</i>						
Chipset	Intel C621 Chipset									
Memory Sockets		th 10 al	hannala	e DIMM	ooolkoto i	with 6 ob	000	ala nar nraas	2004	
	12 DIMM sockets with 12 channels. 6 DIMM sockets with 6 channels per processor									
Memory Types		DDR4-2666 RDIMM 768GB (DDR4-2933 RDIMM) or 384GB (DDR4-2666 RDIMM)								
Memory Capacity		RDIIVII	vi) or 38	4GB (DD	H4-2666	RDIMIN)			
Memory Protection	ECC									
Expansion slots	Slot 2 (CPU1) PC Slot 3 (CPU1) PC Slot 4 (CPU1) PC Slot 5 PC	le 3.0 x le 3.0 x le 3.0 x l, full he	:16, full h :8, full he :16, full h eight, ful	neight, ful neight, full neight, full neight, full I length, 2 eight, halt	I length, length, 2 I length, 25W	75W, do 5W, ope 75W, do	n er uble	nded -width		
	Graphics	Me	emory	Power	Cor	nector		SLI / NVlink	Max Qty	
	NVS 810		3 DDR3	68W		nini DP		OLI / I V III III	2	
	Quadro P400		GDDR5			niniDP			3	
	Quadro P600		GDDR5			niniDP			3	
	Quadro P620	2GB	GDDR5	40W	4xr	niniDP			3	
	Quadro P1000	4GB	GDDR5	50W	4xr	niniDP			3	
	Quadro P2000	5GB	GDDR5	75W	4	xDP			3	
Discrete Graphics	Quadro P4000	8GB	GDDR5	120W	4	xDP			2	
Offering	Quadro P5000	16GB	GDDR5	X 180W	DVI-D	DL+4xD	P	SLI	2	
	Quadro P6000	24GB	GDDR5	X 250W	DVI-D	DL+4xD	P		1	
	Quadro RTX 4000	8GB	GDDR6	160W	3xDP, 1x	\[VirtualL \]	ink		2	
	Quadro RTX 5000			6 265W					1	
	Quadro RTX 6000			6 295W					1	
	Quadro RTX 8000			6 295W					1	
	Quadro GP100		B HBM2		1xDVI-D		DP		1	
	Quadro GV100	32G	B HBM2	250W	4	xDP			1	
	Storage Controller	Type		Interface		RAID)	Ca	che	
	Onboard Intel RSTe		S	ATA 6Gb	's	0/1/10	/5			
	9440-8i PCIe			Gb/s, SAT		0/1/10				
Storage Controller	9460-16i PCle	Opt :	SAS 120	Gb/s, SAT	A 6Gb/s	0/1/10/	5/6	4GB DDR4	, SuperCap	
	NVMe Basic	Opt		Cle NVM		0/1/1				
	NVMe Premium	Opt		Cle NVM		0/1/10				
	NVMe for Intel SSD	Opt	P	Cle NVM	е	0/1/10	/5			
	Disk Type In	terface	RPM	(Offering			Max C Blind connect used	ión + 9460)	
	3.5" SATA HDD SAT				TB/4TB/		6 (4	Also support x 2.5" SATA S	s additional SSD/HDD)	
Storage Support	2.5" SATA HDD SAT				3/500GB		PS 10			
			/s 10K		GB/600G			8		
	2.5" SATA SSD SAT			256GB/5	12GB/1T	B/2TB		10		
	2.5" PCIe SSD PC			OECOD'S	1.5TB	D/OTD		2		
	M.2 PCIe SSD PC				<u>12GB/1T</u> 480GB	D/ZIB		9		
	I OIE AIO SSD IFO	IN A IA			-00GB					

	Bay Type Ma	aximum Drives Qty						
	M.2 slot 9x M.2 SSD (2 onboard, 7 via							
	2 flex bays. Supports the follow							
	2x half-height optical drives							
	• 2x 5.25" 9.0mm optical drive							
		e + 1x 3.5"/2.5" SATA SSD/HDD						
	4 1 2 5 1 / 2 5 1 C ATA COD/UDI	O with Front Access Storage Enclosure						
	Flex Bay 1x 3.5 72.5 SATA 33D/HDL 1x flex module for the follow							
Storage Bays	Tray 1: 9.0mm optical							
	Tray 2: 15-in-1 USB 3.0 read	der or 2x Thunderbolt						
	Port 1 and 2: Front USB 3.0	Type-C or eSATA						
	2x M.2 SSD with 2x Front Removable Drive Enclosures							
	4 disk bays (2 bays standard, 2 bays optional). Supports one of the following							
	configurations:							
	Disk bay • 4x 3.5" SATA HDD • 4x 2.5" SATA SSD/HDD (Blind connection needed)							
	9 4X 3.5 SAIA NDD + 4X 2.5	v 2.5" SAS HDD (Blind connection needed)						
	 8x 2.5" SATA SSD/HDD or 8x 2.5" SAS HDD (Blind connection needed 2x 2.5" PCle SSD + 2x 3.5"/2.5" disks (Blind connection needed) 							
		DD/10x 2.5" SSD/10x 2.5" HDD + 2x PCle AIC						
Max Storage	SSD.							
	All HDD: 36TB using 6x 3.5" HDD	COD OV M 2 COD and 2v DCIa AIC COD						
		SSD, 9x M.2 SSD, and 2x PCle AIC SSD						
Power cumby	Supports one of the following:	O DLUS Platinum qualified						
Power supply	• One fixed 690W, autosensing, 92%, 80							
	• One fixed 900W, autosensing, 92%, 80	s. Optional UHS-II 15-in-1 USB 3.0 reader on						
Media reader	flex module	s. Optional Ons-II 15-III-1 USB 3.0 reader on						
Network		ol i210LM and i210AT) augnorte Wake on LAN						
interfaces	on both two ports. Optional PCIe ethern	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet are available						
WLAN +								
Bluetooth	867Mbps	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to						
Diuetootri		Dietferm Medule TCC 0.0 compliant quitale te						
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							
Security leatures	lock, and pad lock	witch. Optional access pariel lock, Kensington						
Intel vPro	Intel vPro technology supported vPro re	equires Wireless-AC 8265 if Wi-Fi is needed						
Intel AMT								
IIILEI AIVIT	Intel Active Management Technology 11							
Diognostic		Diagnostics for Windows. Photo-audio trans-						
Diagnostic	display on flex module	roid and iOS. Optional front 4-digit diagnostic						
Dogo worrenty		/E/NDD						
Base warranty	1 or 3-year limited onsite service with 9x	(O/INDD						
HD Audio	Realtek ALC662 codec							
Front ports), 1x combo audio/microphone jack (3.5mm)						
Rear ports		nalog audio ports (line-in, line-out, mic-in), 2x						
ricai porto	PS/2							
	Supports the following optional ports:							
	Front:							
	 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports 							
	supports video-out							
Ontional narta	1x eSATA on flex module 1x HSB Time Conflex module							
Optional ports	1x USB Type-C on flex module, USB 3.1 gen 1 Page							
	Rear:							
	 1x COM port 2x LISB Type-C ports via PCIe adapte 	r LISB 3.1 gan 2. One 15W one 5W						
	2x USB Type-C ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W Internal:							
	Internal: 1x internal USB 3.0 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)						
	Temperature - storage (no package)	-40 °F to 140 °F (-40 °C to 60 °C)						
Environmental								
specification	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)						
	Humidity - operating	10%~80%, non-condensing						
	Humidity - storage (with package)	10%~90%, non-condensing						
English and the state of the st	D.110							
Environmental	HoHS-compliant. GREENGUARD. EPE	AT Silver rating. ENERGY STAR 6.1 qualified						
Certifications	on model 30BA0007US and 30BA0008	<u> </u>						
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. 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									
Dimensions	200mm/7.87" W x 620mm/24.4" D x 446mm/17.56" H (with feet)									
Weight	Maximum configura	Maximum configuration: 71.3 lb (32.3kg)								
Processor Family	Gold, or Platinum: Up to 28 cores a Up to 3.6 GHz w Up to 38.5 MB ca	Up to two 205 W Gen 1 or Gen 2 Intel Xeon Scalable family processors, Bronze, Silver,								
Processor Sockets	2x FCLGA3647									
Chipset	Intel C621 Chipset									
Memory Sockets	16 DIMM sockets with 12 channels. 8 DIMM sockets with 6 channels per processor									
Memory Types	DDR4-2666 RDIMN									
Memory Capacity	1TB (DDR4-2666 L	RDIMM o	r DDR	4-2933	RDIMM) or 5	12GB (DDR4	-2666 F	RDIMM)	
Memory Protection	ECC									
Expansion slots	Slot 2 (CPU1) PC Slot 3 (CPU1) PC Slot 4 (CPU1) PC Slot 5 (PCH) PC Slot 6 (CPU2) PC Slot 7 (CPU2) PC	Slot 5 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 6 (CPU2) PCIe 3.0 x16, full height, half length, 75W Slot 7 (CPU2) PCIe 3.0 x16, full height, full length, 75W, double-width								
	Graphics	Memo	ory	Power	Connec	tor	SLI /	NVlink	Max Qty	
	NVS 810	4GB D		68W	8xmini				2	
	Quadro P400	2GB GE		30W	3xminil				5	
	Quadro P600	2GB GE		45W	4xminil				4	
	Quadro P620 Quadro P1000	2GB GE		40W 50W	4xminil 4xminil				4	
	Quadro P2000	5GB GE		75W	4xDF				4	
Discrete Graphics	Quadro P4000	8GB GE		120W	4xDF				4	
Offering	Quadro P5000	16GB GD						SLI	3	
	Quadro P6000	24GB GD			DVI-D DL+			SLI	3	
	Quadro RTX 4000	8GB GE			3xDP, 1xVir				3	
	Quadro RTX 5000	16GB GI	DDR6	265W	4xDP, 1xVir	ualLink		/Link	3	
	Quadro RTX 6000	24GB GI	DDR6	295W	4xDP, 1xVir	ualLink	N\	/Link	2	
	Quadro RTX 8000				4xDP, 1xVir			/Link	2	
	Quadro GP100 Quadro GV100	16GB H 32GB H		250W	1xDVI-D DL 4xDF			/Link /Link	3	
	Storage Controller		DIVIZ			RAII			Cache	
	Onboard Intel RST			Interf SATA 6		0/1/10		,	Jacrie	
	9440-8i PCle		SAS 1		SATA 6Gb/s					
Storage Controller	9460-16i PCle	•			SATA 6Gb/s				B DDR4, perCap	
	NVMe Basic	Opt		PCIe N	VMe	0/1/1	0			
	NVMe Premium	Opt		PCIe N		0/1/10				
	NVMe for Intel SSI	Opt_		PCIe N	VMe	0/1/10)/5			
	Disk Type I	nterface	RPM		Offering				Qty used)	
	3.5" SATA HDD SATA 6Gb/s		7.2K	1TB/2TB/4TB/6TB		В	6 (Also supports additional 4x 2.5" SATA SSD/HDD)			
Storage Support	2.5" SATA HDD SA			500GB/500GB FIPS			10			
Clorage Gupport	2.5" SAS HDD SA		10K		00GB/600GB				3	
	2.5" SATA SSD SA			256GB	3/512GB/1TB	/2TB			0	
	2.5" PCIe SSD PC	Cle NVMe		2560-	<u>1.5TB</u> 8/512GB/1TB	/2TB			9	
	PCIe AIC SSD PC			20001	480GB	1210			2	
	1 C10 / 110 COD 1 C	JIS INVIVIE			.0000				_	

	Pay Type Maximum Drives Oty							
	Maximum Drives Qty M 2 slot							
	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2x 3.5" or 2.5" disks. Supports the following:							
	3.5 or 2.5 disks. Supports the following: 3x half-height optical drives							
	• 2x 5.25" 9.0mm optical drives							
	 1x 5.25" 9.0mm optical drive + 1x 3.5"/2.5" SATA SSD/HDD 							
	Flex Bay 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure							
04	ix liex module for the following options.							
Storage Bays	Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.0 reader or 2x Thunderbolt							
	Port 1 and 2: Front USB 3.0 Type-C or eSATA							
	3x M.2 SSD with 3x Front Removable Drive Enclosures							
	8 disk drives with 4 bays (2 bays standard, 2 bays optional). Supports one of							
	the following configurations:							
	Disk bay 4x 3.5" SATA HDD							
	 4x 3.5" SATA HDD + 4x 2.5" SATA SSD/HDD 8x 2.5" SATA SSD/HDD or 8x 2.5" SAS HDD 							
	Supports up to 9x M.2 SSD + 6x 3.5" HDD/10x 2.5" SSD/10x 2.5" HDD + 2x PCIe AIC SSD.							
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% PSU, 80 PLUS Platinum qualified.							
Power supply	Countries with input voltage under 115V, output power limited to 1125 watts							
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.0 reader on							
iviedia reader	flex module .							
Network	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN							
interfaces	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 to							
Bluetooth	867Mbps							
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to							
Security leatures	1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensingtor lock, and pad lock							
Intel vPro	Intel vPro technology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed							
Intel AMT	Intel Active Management Technology 11							
Di	Front 4-digit diagnostic display. ThinkStation Diagnostics for Windows. Photo-audio							
Diagnostic	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 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)							
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x							
riear ports	PS/2							
	Supports the following optional ports:							
	Front:							
	 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out 							
	1x eSATA on flex module							
Optional ports	1x USB Type-C on flex module, USB 3.1 gen 1							
	Rear:							
	• 1x COM port							
	 2x USB Type-C ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W 							
	Internal: 1x internal USB 3.0 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)							
	Temperature - storage (with package) -40 °F to 140 °F (-40 °C to 60 °C)							
Environmental	Altitude - operating (Unpressurized): 0-10000ft (0-3048m)							
specification	Humidity - operating 10%-80%, non-condensing							
	Humidity - operating 10%~50%, non-condensing 10%~90%, non-condensing							
	10%~90%, 11011-condensing							
Environmental Certifications	RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BC0008US and 30BC0009US							
10) (1:0: 1:	Please visit www.thinkworkstations.com/isv-certifications/							
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

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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.

Ju]j, 2019 - Version 5%

Additions in this update

► New product(s)

ThinkVision M14 announced June 2019

► 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 in a way that suits your style. Compare content with ease even as you use laptops of different screen sizes with the ergonomic height adjustable foot. Also, you can wall mount your monitor 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 -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

RoHS (EU 2002/95/EC)

Yes (Arsenic free / Pb free /

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

ENERGY STAR® Power Consumption (Pon)

output)

4.88 W

Power Consumption Sleep/Off

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

Mode < 0.3 W

Height Adjustable Foot Tilt 0°~90°



Monitor Stand



Low blue light

Power Consumption Switch-Off Mode < 0.3 W

Power Supply External (no adapter bundle)

USB Type-C/Power Delivery

Voltage Required DC 5 V to 20 V

Tilt Angle (front/back) -5° / 90°

Up to 65 W

Mounting Support Yes (100 mm)

Kensington™ Lock Slot

Cable Management Yes

Bezel Color Raven Black

Bezel Width (Side) 5.48mm

5.47 mm / 23.87 mm

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

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

Bezel Width (top / bottom)

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

96.54 x 209.03 x 323.37 mm / 3.8 x 8.23 x 12.73 inches Size Unpacked w/stand $(D \times H \times W) (mm / inch)$

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

260.87 x 69.55 mm / 10.27 x 2.74 inches

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)

Stand base footprint area (mm²)

Weight Packed (kg / lbs.)

Image Quality Capability ISO 9241-307



China Energy Efficiency Standard

Low Blue Light / Eye Comfort



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

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

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













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;

Viewing adjustments

user settings: 22

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

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**(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)

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

Accessories 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 Lenovo Easy Reach Monitor Stand 55Y9258

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

See all monitors at www.lenovo.com/thinkvision

Features

• Includes dual input connection for attachment to two

Supports Lenovo Tiny PC and 3rd party thin client via

17-inch Square LCD monitor

Mercury Arsenic free glass

optional Lenovo bracket

Supports optional soundbar

Microsoft® Windows® 7 certified
 Microsoft Windows 8 certified

Microsoft Windows 8.1 certified

• Microsoft Windows 10 certified

Supports SXGA 1280x1024 resolution

systems concurrently (analog and digital)

ThinkVision T1714p Monitor













T2054p Wide Flat Panel Monitor Name Bezel color Raven black 60G1MAR2US / 60G1MAT2EU Type-model Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **19.5" (495mm)** diagonal 16.48" x 10.33" (418.6mm x 262.4mm) **1440x900** Viewable image size Max view area (W x H)

Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.2915 x 0.2915 mm Dot/Pixel per Inch 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 Tilt, swivel, and height adjustable stand Stand Bezel width

Sides: 0.67" (17.0mm) 13.62" H x 17.88" W x 9.55" D; 345.9mm H x 454.2mm W x 242.6mm D Dimensions (HxWxD) Power supply

14.5 watts typical, 21 watts maximum, <0.3 watts standby/suspend, universal, integrated (no external brick-like power supply)

8.16 lb; 3.70 kg

3 year (includes backlight) Weight Limited warrantv4

Available date September 2015

VESA DDC2B/CI VESA-compliant² 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

VGA: Preset resolutions 640x480, 720x400, 720x576

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x800, 1280x1024 WXGA: 1366x768

WXGA+: 1440x900 Standard presets: 22 Presets / user settings user settings: 16

Viewing adjustments

Tilt: 22° backward, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand

Rotating screen 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

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
(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 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

 Supports ThinkCentre Tiny Clamp Bracket Includes dual input connection for attachment to two systems concurrently (analog and digital) Supports optional soundbar

Features

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

Microsoft Windows 10 certified

Widescreen 19.5-inch monitor

• Supports 1440x900 resolution

ÉPEAT Gold certified



ThinkVision T2054p Wide Monitor



E21 Wide Flat Panel Monitor Name **Black**

Bezel color

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

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

Presets display modes Standard presets: 22 **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

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

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/de-

tail.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













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

Type-model 61B7JAR6US / 61B7JAT6EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

Viewable image size

23.8" (**604.7mm**) diagonal 20.75" x 11.67" (527.04mm x 296.46mm) **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 92.5 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)

18 watts typical, 23 watts maximum, Power supply

<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™ Gold rating** Environmental

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

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) Monitor connectors

Signal cables

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) 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

Lenovo August 2017













P24h Wide Flat Panel Monitor Name Bezel color **Black**

Type-model 61AEGAR3US / 61AEGAT3EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

1000:1 (typical)

99% sRGB

4ms (extreme) / 6ms (typical)

12.54 lb; 5.69 kg **3 year** (includes backlight)

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;

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

373.4mm H x 540.2mm W x 261.75mm D 24 watts typical, 120 watts maximum (with USB 3.0 hub),

Viewable image size

23.8" (**604.7mm**) diagonal 20.74" x 11.67" (526.9mm x 296.4mm) **2560x1440** Max view area (W x H)

Native resolution Aspect ratio 16:9

Pixel pitch (mm) 0.2058x 0.2058 mm Dot/Pixel per Inch 124 dpi Brightness 300 nits or cd/m2 (typical)

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 VESA-compliant

April 2017 VESA DDC2B/CI ENERGY STAR® qualified

Power management

Presets display modes

USB hub

Ergonomics Emission standards Environmental

ISO 9241-307 FCC Class B

TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1680x900

WSXGA+: 1680x1050 1920x1080, 1920x1200 Full HD: QHD: 2560x1440

HDMI: 22; DP: 14

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

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

Viewing adjustments Screen pivots 90 degrees from landscape to portrait Rotating screen On screen display with digital user controls (8 languages) On screen display Control features

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

Multimedia

Camera

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 (4) USB 3.1 Type-C (1) USB 3.1 Type-C cable, 1.8 meter Monitor connectors

Signal cables

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 USB 3.1 Type-C cable, 1.8 meter black power cord Ship group

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	













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)

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

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"

Screen Dimensions (H x V) (mm)

527.04 (H) × 296.46 (V)

Panel Type

VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 × 1080

Pixel Pitch (H x V) (mm)

 0.2745×0.2745

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

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)

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

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 inch

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

(Highest Position)

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

Size Unpacked w/o stand (D \times H \times W) (mm/inch)

(Head Only)

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

Weight Packed (kg/lbs.)

4.84kg / 10.67 lbs.

Weight Unpacked (kg/lbs.)

3.36kg / 7.41 lbs.

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

3.07kg / 6.77 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5º / 22º

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 / 22 mm

WHAT'S IN THE BOX

Monitor with stand

1 x HDMI Cable

1 x Power Cable Quick setup guide **CERTIFICATIONS**

ENERGY STAR Rating

7.0

CCC

Yes

EPEAT™

Gold

ULE

Gold

RoHS Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0 to 40°C

Low Blue Light

Yes











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T2224d Wide Flat Panel Monitor Name Bezel color

Black

Type-model 61B1JAR1US / 61B1JAT1EU Panel TFT-LCD, In-Plane Switching (IPS), 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 1000:1 (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)

6.48 lb; 2.94 kg

3 year (includes backlight)
March 2017 Weight Limited warranty

Available date

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: 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: 22; user settings: 22

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

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

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 Gold 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

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 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

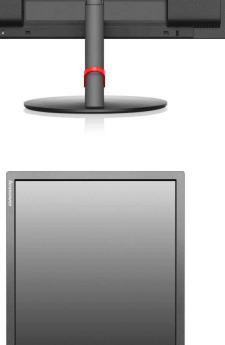
Microsoft Windows 10 certified



ThinkVision T2254 Wide Monitor















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

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) 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

(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













Preset resolutions

Presets display modes

T22i Wide Flat Panel Monitor Name Bezel color **Black** Type-model 61A9MAR1US / 61A9MAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **21.5"** (**546mm**) diagonal 18.74" x 10.54" (476.1mm x 267.8mm) **1920x1080** Viewable image size 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 1000:1 (typical) Pixel response time 6ms (typical); 4ms (extreme mode) Color gamut 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm)
14.08" H x 19.28" W x 9.92" D;
357.6mm H x 489.7mm W x 251.9mm D Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) 16.5 watts typical, 55 watts maximum (with USB 3.0 hub), Power supply <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 10.85 lb; 4.92 kg

3 year (includes backlight) Weight Limited warranty Available date April 2017 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

VGA:

SVGA:

SXGA:

WXGA: WXGA+: WSXGA+:

Full HD:

HDMI: 17;

XGA:

EPEAT Gold certified
 Microsoft® Windows® 7 certified
 Microsoft Windows 10 certified

Supports ThinkCentre Tiny via VESA back mount

Includes dual input connection for attachment to two

Widescreen 21.5-inch monitor

· Supports optional soundbar

systems concurrently

• Supports 1920x1080 resolution



Features

ThinkVision T22i Wide Monitor

Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Viewing adjustments 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 USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0) Control features USB hub 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
(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, 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 USB signal cable, 1.8 meter black power cord

640x350, 640x480, 720x400

1024x768, 1152x864

1280x768, 1366x768 1440x900, 1680x900

800x600

1280x1024

1680x1050

1920x1080

DP: 17

Limited Warranty

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
Kensington Twin Head Cable Lock
See details at www.lenovo.com/support/monitoraccessories

See all monitors at www.lenovo.com/thinkvision













T22v Wide Flat Panel Monitor Name **Black**

Bezel color

Type-model 61BBMAR6US / 61BBMAT6EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

Viewable image size Max view area (W x H)

21.5" (**546mm**) diagonal 18.74" x 10.54" (476.1mm x 267.8mm) **1920x1080** 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 1000:1 (typical)

Pixel response time 6ms (typical); 4ms (extreme mode) Color gamut

12% (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 19.14" H x 19.28" W x 9.92" D; Viewing angle at 10:1 CR Stand

Bezel width

Dimensions (HxWxD)

Power supply

Weight Limited warranty Available date

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

10.16 lb; 4.61 kg

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

VESA-compliant Power management Ergonomics

Emission standards

Environmental

Preset resolutions

ENERGY STAR® qualified ISO 9241-307 FCC Class B

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

485.8mm H x 489.7mm W x 251.9mm D 18 watts typical, 43 watts maximum (with USB 3.0 hub),

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

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

WSXGA+: 1680x1050 Full HD: 1920x1080

Presets display modes Presets: 24; user modes: 20

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

Viewing adjustments Screen pivots 90 degrees from landscape to portrait Rotating screen On screen display On screen display with digital user controls (8 languages)

Direct access for power, menu, input source select, volume up / down, speaker mute and microphone mute USB 3.0 Hub: 1 port into PC (USB 3.0); 2 ports for accessories (2 USB 3.0) Control features

USB hub

Integrated speakers, dual-array microphone, audio-in and Audio-out, optional sound bar supported Integrated FHD camera with IR

Multimedia Camera Integrated FHD camera with IR
Support HDMI, DisplayPort, VGA
(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
(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) Multiple input Monitor connectors

Signal cables

Mounting features

Security

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, 1.8 meter USB signal cable, 1.8 meter black power cord, 1.8 meter HDMl signal cable (Row) 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

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 21.5-inch monitor • Supports 1920x1080 resolution

· Supports optional soundbar

• Supports ThinkCentre Tiny via VESA back mount

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision T22v Wide Monitor













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















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

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

USB hub

61ABMAR1US / 61ABMAT1EU

White LED backlight

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 Gold certified

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) Control features

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

(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 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

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













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

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 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

94 dpi

300 nits or cd/m2 (typical) 1000:1 (typical)

7ms (typical) 77.4% 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

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) 13.60 lb; 6.15 kg

3 year (includes backlight) March 2015

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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

VGA: 640x350, 640x480, 720x400

SVGA: 800x600

XGA: 1024x768 SXGA: 1280x1024

Limited Warranty

WXGA: 1280x720, 1280x768, 1280x800 WXGA+: 1440x900

WSXGA+: 1680x1050, 1600x1200 1920x1080, 1920x1200 Full HD: Standard presets: 21; user settings: 20 **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

Accessories

See all monitors at www.lenovo.com/thinkvision

Screen pivots 90 degrees from landscape to portrait 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) (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

(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)

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

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

See details at http://support.lenovo.com/en_US/guides-and-manuals/de-Kensington MicroSaver Cable Lock 73P2582 tail.page?DocID=UM008281 Kensington Twin Head Cable Lock 45K1620 See details at www.lenovo.com/support/monitoraccessories













Name **T24d Wide Flat Panel Monitor** Bezel color **Black**

Type-model 61B4MAR1US / 61B4MAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

Viewable image size

24" (**609.6mm**) diagonal 20.41" x 12.75" (518.4mm x 324mm) **1920x1200** Max view area (W x H)

Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.27 x 0.27 mm Dot/Pixel per Inch 94 dpi

Brightness 300 nits or cd/m2 (typical)

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

99% 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 19.58" H x 20.99" W x 10.25" D; 497.4mm H x 533.2mm W x 260.4mm D Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

22 watts typical, 64 watts maximum (with USB 3.0 hub),

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

Weight Limited warranty 12.41 lb; 5.63 kg

3 year (includes backlight)

Available date June 2017

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, 720x400

SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080

WUXGA: 1920x1200 Presets display modes Standard presets: 22; user settings: 20 **Features**

 Widescreen 24-inch monitor • Supports 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 T24d 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 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)
Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) On screen display Control features USB hub Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via to (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 (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) Monitor connectors Signal cables 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 USB signal cable, 1.8 meter black power cord, 1.8 meter HDMI signal cable (NA only)

Limited Warranty	Accessories	1
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 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) 21.26" x 10.3" x 14.7" Highest Position

540.2 x 261.75 x 483.4 (mm) 21.26" x 10.3" x 19" (inches) Size Unpacked without Stand

(Monitor Head Only) (mm)

(inches) 21.26" x 1.82" x 12.83" Stand Base Footprint Area

(mm) 250 x 250 (inches)

Weight Packed Unpacked

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

9.84" x 9.84"

540 2 x 46 45 x 325 98

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

Starting at 16.39 lbs (7.45 kg)

1140 / 540 Units

CONNECTIVITY

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

USB Hub

Audio Out

1 x USB 3.01 (Upstream) 4 x USB 3.01

(Downstream, Incl. 1 BC)

. Yes (3.5 mm)

POWER CONSUMPTION

16.5 W Typical Mavimum 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 Yes (100 X 100)

VESA® Mount (mm x mm) 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™ Gold 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

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) (inches)

Stand Base Footprint Area

(mm) (inches) Weiaht Packed 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 DisplayPort™ Video Cables Supplied USB Hub

Audio Out Power

VGA + HDMI™ +

23.8" Wide

WLED

16:9

Yes

Yes

In-Plane-Switching

FHD (1920 x 1080)

527.04 x 296.46

0.2745 x 0.2745

20.75" x 11.67"

250 nits

178°/178°

1000:1

2 x 2W

72% NTSC

16.7 Million

4 ms / 6 ms

3M:1

8 hit

5

VGA, DisplayPort™, USB, Power, HDMI™ (for NA only) USB 3.0 (4 x down, 1 x BC)

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

Yes (3.5 mm) Internal

POWER CONSUMPTION

Typical 16.5 W Maximum 59 W <0.5 W Sleep-Mode Switch Off-Mode <0.3 W Power Supply Internal

Power Voltage 90 VAC - 264 VAC

ENERGY STAR® (Pon) 13.67 W ENERGY STAR® (E_{TEC}) 43.51 kWh

MECHANICAL

-5°/30° Tilt Angle (Front / Back) Swivel Angle (Left / Right) +/-45° Lift Range (mm) 110 +/-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

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)

CERTIFICATIONS

Quick Setup Guide

EPEAT™ Gold **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 Soundbar Support* Yes

EPS Cushion Package

Optional

















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 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 800x600 SVGA:

Presets display modes	XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 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	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	USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)		
Multimedia	Audio-out, optional sound bar supported		
Multiple input Monitor connectors	Support HDMI, DisplayPort, USB 3.1 Type-C tors (1) HDMI (1.4), digital, HDCP-compliant (2) DisplayPort (1.2), digital, HDCP-compliant		
Worldon Connectors			
	(3) USB 3.1 Type-C		
Signal cables	ables (1) 1.8 meter USB Type-C to USB Type-C cable g features 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 1.8 meter black power cord	.8 meter USB Type-C to USB Type-C cable,	

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	













T24v Wide Flat Panel Monitor Name

Bezel color

Type-model 61BCMAR6US / 61BCMAT6EU 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

Black

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

23.8" (**604.5mm**) diagonal 20.75" x 11.67" (527.04mm x 296.46mm) **1920x1080**

16:9 0.2745 x 0.2745 mm

92 dpi 250 nits or cd/m² (typical)

1000:1 (typical)

6ms (typical); 4ms (extreme mode)

178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm) 19.72" H x 21.28" W x 10.32" D;

500.5mm H x 540.2mm W x 261.9mm D

20 watts typical, 45 watts maximum (with USB 3.0 hub), <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply)

11.18 lb; 5.07 kg

3 year (includes backlight)

October 2017 Available date

VESA-compliant

Power management

Ergonomics Emission standards Environmental

VESA DDC2B/CI

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 VGA: 640x480, 720x400

SVGA: 800x600, 832x624 XGA: 1024x768, 1152x864 1280x1024 SXGA: WXGA+: 1440x900, 1600x900

WSXGA+: 1680x1050 Full HD: 1920x1080

Presets display modes Presets: 24; user modes: 20 **Features**

- Widescreen 23.8-inch monitor • Supports 1920x1080 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- · Supports optional soundbar
- EPEAT Gold certified Microsoft® Windows® 7 certified
- Microsoft Windows 10 certified



ThinkVision T24v Wide Monitor

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

On screen display with digital user controls (8 languages)

Screen pivots 90 degrees from landscape to portrait

Viewing adjustments Rotating screen On screen display Control features

USB hub Multimedia Camera Multiple input

Monitor connectors

Security

Signal cables Mounting features

Integrated speakers, dual-array microphone, audio-in and Audio-out, optional sound bar supporte Integrated FHD camera with IR
Support HDMI, DisplayPort, VGA
(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
(2) detachable, HDMI 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)

Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, 1.8 meter USB signal cable, 1.8 meter black power cord, 1.8 meter HDMl signal cable (Row) Ship group

Direct access for power, menu, input source select, volume up / down, speaker mute and microphone mute USB 3.0 Hub: 1 port into PC (USB 3.0); 2 ports for accessories (2 USB 3.0) Integrated speakers, dual-array microphone, audio-in and Audio-out, optional sound bar supported

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

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

See all monitors at www.lenovo.com/thinkvision

73P2582

45K1620













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

23.8" (**604.5mm**) diagonal 20.75" x 11.67" (527.0mm x 296.5mm) **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 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

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 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

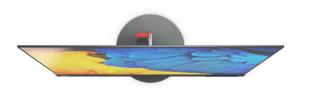












Lenovo ThinkVision X24-20

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	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/monitoraccessori See all monitors at www.lenovo.com/thinkvision	es













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

Stand

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













ThinkVision P32u-10 MONITOR



SPECIFICATIONS

DISPLAY
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 (1931)
Response Time (Typical)

POWER CONSUMPTION

32"
In-Plane Switching
WLED
3840 x 2160
10.0

162
708.48 (H) x 398.52 (V)
300 cd/m ²
178°/178°
1000:1
3M:1
0.1845 (H) x 0.1845 (V)
137

107
99.5% AdobeRGB
6 ms

ENVIRONMENTAL Temperature

Temperature Operating Non-Operating	0°C - 40°C -20°C - 60°C
Humidity Operating Non-Operating	8% - 80% 5% - 95%
Altitude Operating Non-Operating	0 ft - 5000 ft 0 ft - 40,000 ft
Arsenic-Free Glass PVC-Free Mercury-Free	Yes Yes Yes
PCC % of Plastic Resins	85% with >25 g Plastic Parts

844 x 228 x 528

 $33.23" \times 8.98" \times 20.79"$

726 7 4 67 7 4 471 5

DIMENSIONS (W x D x H)

Size Unpacked with Stand

Size Packed

(mm) (inches)

Typical	70 W	
Maximum	200 W	
Sleep-Mode	≤0.5 W	
Switch Off-Mode	≤0.5 W	
Power Supply	External	
Power Voltage	90 VAC - 264 VAC	
Voltage Dynamic Frequency	47 Hz - 63 Hz	
SIGNAL INPUT		

Video Input Signals	2 x HDMI™ 2.0 + DisplayPort™ 1.2 + Thunderbolt™ 3.0-In + Thunderbolt™ 3.0-Out
Video Cables Supplied	HDMI™, DisplayPort™, Thunderbolt™ 3.0
Video Cable Length USB Hub	2 m for Thunderbolt™, 1.8 m for HDMI™ and DisplayPort™
USB Cable Supplied Audio-Out	Yes (4 x Downstream, 1 x BC) Yes (USB Type-A to Type-B) Yes (3.5 mm)

	Lowest Position	
	(mm)	726.7 x 350 x 497.8
	(inches)	28.61" x 13.78" x 19.6"
	Highest Position	
М	(mm)	726.7 x 350 x 606.8
	(inches)	28.61" x 13.78" x 23.89"
	Size Unpacked without Stand	
	(Monitor Head Only)	

)	(inches)	28.61" x 2.49" x 16.99'
	Distance from Table to Panel	
	Lowest Pixel at Bottom of Screen	
	(mm / inches)	90.9 / 3.58"

30 kHz - 160 kHz 23 Hz - 80 Hz	Highest Pixel at Top of Screen (mm / inches) 489.4 / 19.27"	
3840 x 2160	Stand Base Footprint Area	
HDMI™ : 600 MHz	(mm / inches)	350 x 350 / 13.78" x 13.78"

Maximum Pixel Clock Speed /	HDMI™ : 600 MHz	(mm / inches)	350 x 350 / 13.78" x 13.78"
Bandwidth	Display Port™: 5.4 Gbps Thunderbolt™: 10 Gbps	Weight	
Preset / User OSD Buttons	28 / 20 5 Buttons	Packed	Starting at 29.32 lbs (13.3 kg)
DSD Languages English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russiar	English French German	Unpacked	Starting at 22.05 lbs (10 kg)
		Monitor Head Only	Starting at 15.21 lbs (6.9 kg)

MECHANICAL		
Tilt Angle (Front / Back)	-5° / 22°	
Swivel Angle (Left / Right)	45° / 45°	
Lift (mm)	110	
(CW / CCW)	90° / 90°	
VESA® Mount (mm)	100 x 100	

(CVV / CCVV)	30 / 30
VESA® Mount (mm)	100 x 100
Kensington® Lock Slot	Yes
Cable Management	Yes
Bezel Color	Raven Black
Bezel Width	
Ton (mm / inches)	2 / 0 08"

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution

MEGUANUGAL

Top (mm / inches)	2 / 0.08"
Bottom (mm / inches)	23.8 / 0.94"
Sides (mm / inches)	2 / 0.08"

COMPLIANCE

EPEAT™	Gold
ENERGY STAR® Rating	7.0
TCO	TCO 7.0 / TCO Edge 2.0
Windows Certification	Windows 7 / Windows 10
China Energy Efficiency Standard	Tier 2

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability WW

















anti-glare Curvature 1800R

Backlight

WLED

HDR

Panel Type

DISPLAY

Panel Size

43.4 inches

1052.3 x 328.8mm

41.4 x 12.9 inches

VA NearEdgeless,

Screen Dimensions (H x V)

ThinkVision P44w-10

Specifications

32:10 Resolution 3840 x 1200

Pixel Pitch (H x V)

0.2740 x 0.2740mm

Viewing Angle (H x V)

VESA Certified DisplayHDR™ 400

Aspect Ratio

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

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

1 x USB Type-C Gen2)

4 x USB 3.1 Gen1 (1 BC)

Power Consumption

Typical/Max: 70W/250W Switch-off Mode: <0.5W

Size Packed (D x H x W)

47.99 x 19.68 x 14.80 inches

Size Unpacked w/stand

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) (Lowest Position)

Sleep/Off Mode: <0.5W

DIMENSIONS

1219 x 500 x 376mm

USB Downstream

Power

Internal

(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

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

SPECIAL FEATURES

Anti-Glare Yes

13.45kg/29.65lbs.

PIP/PBP Yes **Software**

Yes (ThinkColor)

Speaker Supports optional Harman Kardon certified speaker

-5°/22°

Yes

MECHANICAL

Tilt Angle (front/back)

Swivel Angle (left/right)

Kensington™ Lock Slot

Yes (130mm) **VESA Mount Capability** Yes (100 x 100mm)

Lift (Max. range)

1 x DP cable
1 x USB Type-C Gen2 cable
1 x USB Type-C to Type-A cable Quick setup guide

Cable Management

Bezel Width (side)

Bezel Width (top/bottom)

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x HDMI cable

Yes

Bezel Color

Raven Black

2.4/25.6mm

2.4mm

CCC Yes

ENERGY STAR® Rating

CERTIFICATIONS

8.0

RoHS

Yes

ULE

Gold

TCO

TÜV Eye Comfort



Windows Certification Windows 7, Windows 10

China Energy Efficiency

Tier 2 **Ambient Operating Temperature**

0°C to 45°C

Yes

Standard

*with FreeSync support graphic cards © 2019 Lenovo. All rights reserved. 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 Gent; 10 Gbit/s for USB 3.1 Gent & 2.0 Gbit/s for USB 3.2. These products are available while supplies last. Prices shown are subject to change without notice. For any questions concerning price, please contact your Lenovo Account Executive. Lenovo is not responsible for photographic or typographic errors. Warranty: For a copy of applicable warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC 27709, Attn: Dept. ZPYA/B600. Lenovo makes no representation or warranty regarding third-party products or services. Trademarks: Lenovo, the Lenovo logo, Rescue and Recovery, ThinkPad, ThinkCentre, ThinkStation, ThinkVantage, and ThinkVision are trademarks or registered trademarks of Lenovo. Microsoft, Windows, and Vista are registered trademarks of Microsoft Corporation. Intel, the Intel logo, Intel Inside, Intel Core, and Core Inside are trademarks of Intel Corporation in the U.S. and/or other countries. Other company, product, and service names may be trademarks or service marks of others.













Think Vision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 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)

1000:1

Dynamic Contrast Ratio (typical)

3M: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.)

4.22ka / 9.30 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

(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

1x VGA Cable (AP. EMEA only)

1x Power Cable

Quick setup quide

CERTIFICATIONS

ENERGY STAR Rating

7.0

TCO

70

EPEAT™

Gold

ULE

Gold

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















enovo













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

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















*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

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















1 × Power Cable 1 × USB Type-C[™] to Type-C[™] cable

*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 are not connected and OSD brightness setting is <31.

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® T27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 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)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

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

Yes

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)

Yes

(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 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™

Gold

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



























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

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)

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

Yes

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

7.1

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;

Rotating screen None

tail.page?DocID=UM008281

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/deAccessories

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

See footnotes for important warranty information





















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

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

8% - 80%

5% - 95%

Humidity Operating Non-Operating

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) 1.2 / 0.05" Sides (mm / inches) 1.2 / 0.05"

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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