

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 548, September 2019

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Summary of Changes

This section describes the technical changes made in this edition.

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

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Additions in this update

► New product(s)

None

▶ Others

ThinkPad P1 (2nd Gen) - Spec updated

ThinkPad P43s - Spec updated

ThinkPad P53 - Spec updated

ThinkPad T490 - Spec updated

ThinkPad T490s - Spec updated

ThinkPad X1 Carbon (7th Gen) - Spec updated

ThinkPad X1 Extreme (2nd Gen) - Spec updated

ThinkPad X390 - Spec updated

Withdrawals in this update

► Withdrawn product(s)

ThinkPad L470

ThinkPad X1 Carbon (5th Gen)



ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th General Intel Pentiur				rocessor,	Intel Ce	eleron® proces	sor, or		Dimensions Weight	WxDxH: 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb / 1.36 kg
	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 t display:	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		ax resolution: 3840x2160@60Hz (USB Type-C); 4096x2160@30Hz (HDI								Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Memory	4GB or 8GE	Intel SoC (System on Chip) platform 4GB or 8GB / 1866MHz LPDDR3 or 2400MHz DDR4 / soldered to systemboard, no sockets								Security Security chip	Power-on password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
Display	Size 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)	on 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										3-year/1-yr battery depot repair service
										Mil-Spec test	MIL-STD-810G military testing
											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	APUs							rOptional: 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		Types	Graphics AMD	1 0110	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				
	DD0 440 0000D	4	4	0.5.011	2MB DDB4-1866			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			AMD Radeon	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter				
	PRO A12-9800B	4		2.7 GHz	3.6 GHz			R7 Graphics	Camera (ontional)HD720p resolution, fixed focus				
	* Windows 7 is or	nly supp	ported by	PRO A10-87	30B and PR	O A12-8	830B			HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /				
Graphics	AMD Radeon F								Karda a sud	dual array microphone, combo audio/microphone jack				
	supports extern supports three	indepe	endent di	isplays;				(1.5.4h)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Obline	Max resolution:			· · · · · · · · · · · · · · · · · · ·	Type-C); ²	1096x2	160@30Hz	(HDMI)	Security	Power-on password, hard disk password, supervisor password, security keyhole				
Chipset Memory	AMD SoC (System 16GB max / 186				SO-DIMM	socket			Security chip	dTPM 1.2: discrete TPM 1.2, TCG Certified dTPM 2.0: discrete TPM 2.0. TCG Certified				
Display	Some: 12.5" (3						acklight,		Fingerprint reade	r Optional: Touch style match on chip fingerprint reader on the palm rest				
	220 nits Some: 12.5" (3			ratio, 500:1) booklight	IDC	NFČ	None				
				ratio, 700:1					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 No + 3-cell 3-cell + 3-cell 3-cell + 6-cell 48Wh				
Storage	System has one I Some: HDD / S						Protoction S	vetom TM	(MobileMark® 2014)	Max battery life 5.05 fil 10.1 fil 15.6 fil				
	Some: SSD / S	SATA 6	6.0Gb/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	Some: M.2 SS None	SD / PC	Cle NVM	e, PCIe 3.0	x 2, 16Gb/	S			Operating system	One of the following, configurable by model:				
Ethernet	Realtek® RTL8	111FP	V Gigab	it Ethernet	connection				'	Windows® 7 Professional 64 preinstalled				
WLAN	Realtek RTL882					1.2 card			-	through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64				
Bluetooth™	Bluetooth 4.1 w									Windows 10 Pro 64				
WWAN (optional)				by model:					Limited warranty	One of the following, configurable by model: 1-year depot repair service				
	Wireless WANIntegrated Mo			d 4G LTE-A						3-year/1-yr battery depot repair service				
	Qualcomm® S * For non-WWAN	Snapdr	agon™ 2	X7 LTE-A (S	Sierra Wirel	ess EN	17455)			3-year/1-yr battery limited onsite service				
SIM card (opt)	Micro-SIM card	slot, c	opt Verizo	on LTE (US) SIM card	upgrau	able		Mil-Spec test	MIL-STD-810G military testing				
Dimensions		xDxH: 12.03" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm							Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
Weight	Models		3-cell	_	+ 3-cell		3 + 6-cell							
Case color	Weight 2	2.79 lb /	/ 1.27 kg	2.98 lb	/ 1.36 kg	3.33	lb / 1.52 kg							
Case color Case material	Glass-Fiber Re	inforce	ed Plastic											
Note: The specific:					_				•	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		Smart card reader 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 OSB-C to DP: Lenovo USB-C to DisplayPort Adapter OSB-C to VGA: Lenovo USB-C to VGA Adapter OSB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to VGA: Lenovo USB-C to DisplayPort Adapter USB-C to VGA: Lenovo USB-C to DisplayPort Adapter USB-C to DisplayPort Adapter			
	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	Audio support	IR camera and HD720p camera, fixed focus			
Display	Some: 12.	5" (317	7.5mm) H	D (1366x7		are, LED			Audio support	HD Audio, Realtek ALC3287 codec / 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 keyhole			
Storage	 M.2 SSD 	/ SATA	6.0Gb/s	-					Security chip Discrete TPM 2.0, TCG Certified 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	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 v 200 (2mm v 17	9mm		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Weight	12.11" x 8.26" x 0.70"; 307.7mm x 209.8mm x 17.8mm FHD non-touch model: 2.49 lb / 1.13 kg; HD non-touch model: 2.78 lb / 1.26 kg;									2. 2.1. asia (ee siny), Erechai Sinti S.I., Horio somplant			
Case color	FHD multi-t Black	touch r	nodel: 2.	79 lb / 1.27	7 kg								
Case material		Display cover: Carbon Fiber (FHD non-touch model) or PPS (HD & FHD multi-touch model);											
	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	0.0 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	DDR4-1866	AMD	Case material	Bottom: Glass-Fiber Reinforced Plastic			
	PRO A10-9700B]		2.5 GHz	3.4 GHz			Radeon	Smart card reade	er 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	D 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				or USB is	pe-C;				* Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	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) Audio support)HD720p resolution, fixed focus 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			
Storage	System has one h								dTPM 2.0: discrete TPM 2.0, TCG Certified Fingerprint reader Optional: Touch style match on chip fingerprint reader on the keyboard NFC None				
_	Some: HDD / S							ystem™					
	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	lue to M	.2 SSD adap	ter limitation		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				(MobileMark* 2014)	Max battery life 5.15 10.26 11 10.26 11 15.4 11			
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:			
	 Wireless WAN 	l upgra	adable	•						Windows® 7 Professional 64 preinstalled Windows 8 Professional 64 preinstalled Windows 10 Professional 64 preinstalled			
	Integrated Mo						I - 4 1			through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64			
	Qualcomm® Snapdragon TM X7 LTE-A (Sierra Wireless EM7455) * For non-WWAN model, it means the model is NOT WWAN upgradable									• Windows 10 Pro 64			
SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) SIM 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 			
									Mil-Spec test	MIL-STD-810G military testing			
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
									LIMIOHHEHL	EFEAT Gold (03 offly), ENERGY 3 IAN 0.1, Rond-compilant			









ThinkPad A485 Platform Specifications

Processor	AMD Ryzer	ı™ PRO) Mobile	Processors	with Rade	on™ Vega	Graphics		Smart card reader 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		luency Frequency Types Graphics			Graphics	1 0110	two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),				
	Ryzen 3 PRO 2300U	00U 4 2.0 GHZ 3.4 GHZ 6 Graphics			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	* Depending on many factors, actual data transfer speed may be lower than theor Monitor cable(opt) HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter					
Graphics	AMD Raded supports ex supports for	ternaľ	digital m	onitor via F					Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None One of the following, configurable by model:				
	Max resolut				JSB Type-0	C): 4096x2	2160@60H	z (HDMI)	Carriera (optional)	HD720p camera with ThinkShutter camera privacy, fixed focus				
Chipset	AMD SoC (Syster	n on Chir	o) platform	71	,,		, ,	Audio aupport	• IR camera and HD720p camera, fixed focus				
Memory	32GB max	/ 2400	MHz DDİ	Ŕ4, dual-ch				IMM sockets	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /				
Dianloss	* Installed DI							tion		dual array microphone, headphone / microphone combo jack				
Display					0:1 contras		ckiigni,		Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight				
	Some: 14.0	0" (355	mm) FH	D (1920x10	080), anti-g	lare, LED	backlight, I	PS,	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Multi-touch (opt)	On-cell touc	nits, 1 ch. sur	16:9 aspe	ect ratio, 70 -finger ges	u:1 contras ture (FHD (st ratio, 170 only)	o° viewing a	angie	Security Security chip System Mgt Power-on password, hard disk password, supervisor password, security Discrete TPM 2.0, TCG Certified DASH Management					
Storage	System has o		-				age							
2121192	Some: HD	D/SA	TA 6.0Gb	/s, 2.5" wid	de, 7mm hi	gh, Active		System™	Fingerprint reader	r Optional: Touch style match on chip fingerprint reader on the keyboard bezel None				
	Some: SSI Some: M.2					gh			Battery Integrated Li-ion 24Wh battery and					
	Some: 128	BGB M	.2 SSD /	PCIé NVM	e, PCIe 3.0					external Li-ion 24Wh, 48Wh, or 72Wh battery				
	in V	VWAN	slot as 2	nd Storage	e, mutually	exclusive v	with WWAN	 pter limitation	Max battery life (MobileMark® 2014)	Models 24Wh 48Wh 72Wh 24Wh + 24Wh 24Wh + 48Wh 24Wh + 72Wh				
Optical	None	2 000	15 1 010 0.1	J X + Dul Tull	ai i Oic 0.0	X 2 000 10 1	n.z ood ada	pici ilililation	(WODIIEWark* 2014)	Max battery life 5.37 ftr 10.76 ftr 10.76 ftr 10.76 ftr 22.15 ftr				
Ethernet	Realtek® R	ΓL811	1GUL Giç	gabit Ether	net connec	tion			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter				
WLAN	Realtek RTI								Operating system	Windows® 10 Home 64 or Windows 10 Pro 64				
Bluetooth™	Bluetooth 4					tooth com	bo adapter		Limited warranty	One of the following, configurable by model:				
WWAN (optional)	Integrated N Intel XMM™									1-year depot repair service				
	* For non-WV	VAN m	odel, it me	ans the mod	lel is NOT W		dable			 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 				
SIM card (opt)	Nano-SIM o				<u> </u>				Mil-Spec test	MIL-STD-810G military testing				
Dimensions Weight					_,		x 19.95mm		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
vveigni	Models	2			1 48Wh, 72		/h + 48Wh /	72Wh	Liviloriment	El Ext. doid (00 only), Elleria i orari orari orari orari				
	Magnesium PPS			/ 1.58 kg / 1.65 kg		3.92 lb / ·								
Case color	Black					1.00 107	ng							
Case material	Display cover: Magnesium Hybrid or PPS; Bottom: Glass-Fiber Reinforced Plastic													
Note: The specifica	Bottom:									Lenovo				











ThinkPad E480 Platform Specifications

Processor	7th Genera (i3-7130U 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	Starting at 3.87 lb / 1.75kg Black or silver		
	i3-7020U	0	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic		
	i3-7130U i5-7200U	2	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	tion Ir	itel Core	i3 / i5 / i7 l					Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On),		
		# of Cores			Max Turbo Frequency	Cache	Memory Types	Processor Graphics		one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole		
	i3-8130U i5-8250U	2	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Camera	*Depending on many factors, actual data transfer speed may be lower than theoretical speed HD720p camera, fixed focus		
Graphics	Intel HD Gr	aphic	s 620 or					nly or	Audio support	HD Audio, Synaptic® CX11852 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
	Intel HD Gr AMD Rade supports ex	on RX kterna	(550 Gra I digital n	aphics, 2GI nonitor via	3 GDDR5 r	nemory	′ ;	ıa	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
	supports du Max resolu	uai inc tion: 1	iepender 1920x108	nt dispiay; 80 (HDMI)	@60Hz				Security	Power-on password, hard disk password, supervisor password, security keyhole		
Chipset Memory	Intel SoC (\$ 32GB max * System clo	/2400	MHz DE	ÒŔ4, dual-c	hannel car	able, to	wo DDR4 S	O-DIMM sockets	vPro	Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified None r Optional: Touch style fingerprint reader on the palm rest None		
Display	Some: 14.) nits, 0" (35	16:9 asp 5mm) Fl	ect ratio, 4	00:1 contra 1080), anti-	st ratio glare, L	ED backlig		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: 13.51 hr		
Multi-touch	None) IIIIS,	10.9 asp	ect fallo, 4	OO. I COIIII	isi ralio			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
Storage	Up to 2 drive Some: HD					ablo ur	aradabla		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
0	Act Some: M.2	ive Pro 2 SSD	otection S / 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™ memor Optical	'y <i>Optional:</i> II None	ntel O	ptane me	emory, PCI	e NVMe, P	Cle 3.0	x 2		Mil-Spec test	MIL-STD-810G military testing		
Ethernet	Gigabit Eth	ernet	Connect	ion, Realte	k R8111G	JS			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		
WLAN + Bluetooth™	One of the following, configurable by model: Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS									, , , , , , , , , , , , , , , , , , , ,		
WWAN SIM card	None None											

























ThinkPad E490 Platform Specifications

Processor	8th Generation Intel®	Core™ i3 / i5 / i	7 Processor			Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm			
	Processor # of # of Cores Three	eads Frequency	Max Turbo Frequency Cach	Types	Processor Graphics	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			
	i3-8145U 2 4 i5-8265U 4 8	1.6 GHz	3.9 GHz 4ME 3.9 GHz 6ME 4.6 GHz 8ME	DDR4-240	Intel UHD Graphics 620	Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic			
Crophico	Intel UHD Graphics 6			7		Smart card reade Media reader	rNone MicroSD card reader			
Graphics	Intel UHD Graphics 6. AMD Radeon RX 550 supports external digi supports dual indeper Max resolution: 4096	320 in processor DX Graphics, 2G ital monitor via I ndent display;	and BB GDDR5 men HDMI or USB T	/pe-C;	⊉24Hz (HDMI)	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and 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	Intel SoC (System on	Chip) platform		t DDD4	OO DIMM lt-	Monitor cable Bundled Accy	None			
Memory	32GB max / 2400MHz * Installed memory is act	z DDH4, duai-ci tually 2666MHz bu	nannei capable ut run at 2400MH.	, two DDR4 : z due to Intel l	SO-DIMM sockets	Camera	HD720p camera, fixed focus			
Display	Size / Resolution		Rati		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				
		Anti-glare TN	220 nits 16:9		90° Non-touch 170° Non-touch	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
Multi-touch	14.0" FHD (1920x1080) None	Anti-glare 1P5	250 mis 16.8	9 600:1	170° Non-touch	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Storage	Up to two drives (one M. • HDD / SATA 6.0Gb/ • M.2 2280 SSD / SA • M.2 2280 SSD / PC • M.2 2242 SSD / PC	/s, 2.5" wide, 7m NTA 6.0Gb/s DIE NVME, PCIE DIE NVME, PCIE	nm high, Active 3.0 x 2 3.0 x 2		ystem™	Security Security chip System Mgt Fingerprint reade NFC	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	e memory, PCIe	e NVMe, PCIe 3	3.0 x 2		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)			
Ethernet	Gigabit Ethernet Con	nection. Realtek	R8111GUS			Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 13 hr			
WLAN + Bluetooth™	One of the following, • Realtek® RTL8822B	configurable by	model:	ooth 4.2. M.2	P card	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
	Intel Wireless-AC 92					Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
WWAN SIM card	None None					Limited warranty	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™ Silver; ENERGY STAR® 7.1; RoHS-compliant			

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ThinkPad E490s Platform Specifications

Processor	8th Generation In	itel® Cor	e™ i5 / i7 P	rocessor					Dimensions					
	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	rNone				
Graphics	Intel UHD Graphi Intel UHD Graphi AMD Radeon RX supports external supports three in Max resolution: 4	cs 620 i 540X G digital r depende 1096x23	n processor Graphics, 20 monitor via l ent display; 04@60Hz (r and 3B GDDR5 HDMI or US USB Type-	SB Typ	e-C;	@24Hz	(HDMI)	Media reader 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 Displ 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 theoretic None Mone Mone 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 Displ HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, 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 Displ HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader None None None					
Chipset Memory	32GB max / 2400	itel SoC (System on Chip) platform 2GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sock Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation							Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /				
Display	Size / Resolution	Su	ırface Type	Brightness	Aspect Ratio	Contrast Natio	Viewing Angle	Multi-touch		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack				
	14.0" FHD (1920x1			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	000) Aiii	i-giare 11 0	250 1113	10.5	000.1	170	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified				
Storage	One of the following • M.2 2280 SSD / • M.2 2242 SSD /	SATA 6	6.0Gb/s						System Mgt Fingerprint reader	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 • Realtek® RTL88 • Intel Wireless-A	322BE, V	Vi-Fi 2x2 80	2.11ac + E				I	Max battery life	MobileMark® 2014: 11.5 hr * Battery life varies significantly with settings, usage, & other factors				
WWAN	None								AC adapter	45W or 65W USB Type-C AC adapter				
SIM card	None								<u> </u>	Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
									l	1-year depot repair service				
									Mil-Spec test	MIL-STD-810G military testing				
	ii aati ama ahaya maaya m								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 R) monitor via ent display; 160@60Hz	HDMI or USB Type	JSB Type	e-C;		HDMI)	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theore None Monitor cable Bundled Accy None		
Memory	AMD SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM s * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation									Camera HD720p camera, fixed focus Audio support HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /		
Display	Size / Reso	olution	8	Surface Typ	face Type Brightness Aspect Contrast Viewing Ratio Ratio Angle Multi-touch						dual array microphone, headphone / microphone combo jack	
	14.0" HD (1			nti-glare TN		16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad	
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									Operating system Limited warranty		
WWAN SIM card	None 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 Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics		* Intel Dual Band Wireless-AC 3105, 1x1, WI-FI + Bidetooth 4.1, M.2 Card * Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS
	i5-71300 i5-7200U	2	4	2.7 GHz 2.5 GHz	3.1 GHz	3MB	DDN4-2133	620	WWAN SIM card	None None
	8th Genera	ation In	itel Core	i3 / i5 / i7 F	Processor				Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.95mm
			# of Threads	Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver
	i3-8130U i5-8250U	2	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic
	i7-8550U * i3-7130U is	s NOT a	available ii	1.8 GHz	4.0 GHz <i>1FA</i>	8MB			Smart card reader Media reader	MicroSD card reader
·	Intel HD G Intel HD G AMD Rade	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 GDDR5 r	20 in p nemory			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	ıtion: 1	1920x108	n display; 30 (HDMI)@ p) platform	2960Hz				Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Memory	32GB max	/ 2400	MHz DD	R4, dual-c	hannel cap	able, t	wo DDR4 S	O-DIMM sockets		dual array microphone, headphone / microphone combo jack
Display	Some: 15	.6" (39	6mm) H		88), anti-gla	are, LE	D backlight,		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Some: 15	.6" (39	6mm) Fl		1080), anti-	glare, l	LED backlig	ht, IPS,		Power-on password, hard disk password, supervisor password, security keyhole t)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
	None		<u>'</u>						vPro Fingerprint reader	None r Optional: Touch style fingerprint reader on the palm rest
				and one HD b/s, 2.5" wi		able. ur	ogradable.		NFČ .	None
		tive Pro	otection S	System™	,	,	granaura,		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	a rnat	Cannaat	ion, Realte	L D011101	ıc			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	l® Core	e™ i3 / i5 / i7	7 Processo	r				Dimensions	WxDxH: 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm Starting at 4.68 lb / 2.12 kg Black or silver		
		# of rreads		Max Turbo Frequency	Cache	Memory Types		Processor Graphics	Weight Case color Case material			
	i3-8145U 2 i5-8265U 4	8	2.1 GHz 1.6 GHz 1.8 GHz	3.9 GHz 3.9 GHz 4.6 GHz	4MB 6MB 8MB	DDR4-24	00 Intel	UHD Graphics 620	Smart card reade			
Graphics	Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon RX 550X Graphics, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)								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 2 (with the function of Power Delivery and DisplayF 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 security should be accepted by the company of			
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation								Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /		
Display	Size / Resolution	Su	ırface Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Multi-touch		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
	15.6" HD (1366x768)		i-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) Anti-glare IPS 250 nits 16:9 600:1 170° Non-touch None								Security Power-on password, hard disk password, supervisor password, security keylocurity chip Integrated model: discrete TPM 2.0, TCG Certified			
Storage	Up to two drives (one i • HDD / SATA 6.0Gi • M.2 2280 SSD / S • M.2 2280 SSD / F	b/s, 2. SATA 6 PCIe N	.5" wide, 7m 3.0Gb/s IVMe, PCIe	m high, Ac 3.0 x 2	tive Pr	otection S	System™	М	Discrete model: firmware TPM 2.0 integrated in chipset System Mgt None Fingerprint reader Optional: Touch style fingerprint reader on the palm rest NFC None			
Optane™ memor	M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 bry Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 None None								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: 11 hr		
Ethernet	Gigabit Ethernet Co	onnect	tion, Realtek	R8111GU	IS				,	* Battery life varies significantly with settings, usage, & other factors		
WLAN + Bluetooth™	One of the following, c • Realtek® RTL8822 • Intel Wireless-AC	2BE, V	Vi-Fi 2x2 80	2.11ac + B				I	AC adapter Operating system Limited warranty	45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:		
WWAN SIM card	None None									1-year mail-in repair service1-year depot repair service		
									Mil-Spec test Environment	MIL-STD-810G military testing 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 Starting at 4.7 lb / 2.1 kg Black Display cover: Aluminum; Bottom: PC/ABS plastic					
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Controller	Processor Graphics	Weight Case color						
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3		Radeon Vega 3 Graphics	Case material						
	Ryzen 5 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics	Smart card reade Media reader	MicroSD card reader					
	Ryzen 7 3700U	4	0	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),					
Graphics	supports of supports of Max resol	externa dual in ution:	al digital depende 3840x2		HDMI or I (USB Type	JSB Type	e-C;	or; s0Hz (HDMI)	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 theoretic Monitor cable Bundled Accy None						
Chipset Memory	32GB ma	x / 240	0MHz D	hip) platfor DR4, dual- <i>lly 2666MHz</i>	channel ca	apable, tv 400MHz d	vo DDR4 Soue to AMD lir	O-DIMM sockets	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 Williti-touch	 Keyboard UltraNav™	6-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				Non-touch Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole					
Multi-touch	None								Security chip Fingerprint reade	Discrete TPM 2.0, TCG Certified 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		Max battery life	with 65W USB Type-C AC adapter 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™	 Realtek[®] 	BRTL8	822BE,	<i>nfigurable b</i> Wi-Fi 2x2 8), Wi-Fi 2x2	302.11ac +				l	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:					
WWAN SIM card	None None	0.033 7	10 0200	, **: : 1 ZAZ	002.1140	Didoto	761 0.0, IVI.Z	oura		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	Starting at 3.22 lb / 1.46 kg Black or Silver
	Cel 3965U	00100	2	2.2 GHz	-	2MB	Туроо	Intel HD Graphics 610	Case material	Display cover: Aluminum Bottom: GFRP
	i3-7020U i3-7130U i5-7200U	2	4	2.3 GHz 2.7 GHz 2.5 GHz	2.3 GHz - 3MB 2.7 GHz - 3MB DDR4-2133 Intel HD Graphic		Intel HD Graphics	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:								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
	Max resolu	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (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	32GB max	رُ \'240	DMHz DE	p) platform DR4, dual-c cessors with	hannel car	able, t	wo DDR4 S	O-DIMM sockets	Security Power-on password, hard disk password, supervisor password, security keyho Discrete TPM 2.0, TCG Certified Intel vPro Technology Fingerprint reader Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology NFC (optional) Near Field Communication	
Display	Some: 13	50 nits, 3.3" (3:	, 16:9 ๊ası 38mm) F	pect ratio, 5 HD (1920x	500:1 contra 1080), anti-	ast rati -glare,	D backlight, o LED backlig o, 170° view	ıht, IPS,		Intel vPro Technology r Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology
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								Max battery life	with 65W USB Type-C AC adapter 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				nection I21 ernet Exter			1219-LM (v	Pro)	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 * Intel 8265	Band V	Vireless-		Vi-Fi 2x2 80)2.11a	+ Bluetootl Vindows 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 readerNone			
	Processor # of # of Number Cores Threa				Memory Types		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	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 USB-C to VGA Adapter: Lenovo USB-C to VGA 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)	(optional) Bundled	USB-C to VGA (plus Power) Adapter: USB-C to HDMI Adapter: USB-C to HDMI (plus Power) Adapter: Lenovo USB-C to HDMI Adapter: USB-C to DisplayPort Adapter: USB-C to DisplayPort Adapter: USB-C to Ethernet Adapter: USB-C to Ethernet Adapter: USB-C to Ethernet Adapter
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 Type Brightness Aspect Contract Ratio Viewin						Viewing Angle	Audio support	HD/20p carriera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	<u> </u>	13.3" HD (1366x768) Anti-glare TN 250 nits 16:9 500:1 90° 13.3" FHD (1920x1080) Anti-glare IPS 250 nits 16:9 700:1 (non-touch) 800:1 (multi-touch) 170°				n-touch)	90° 170°	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.









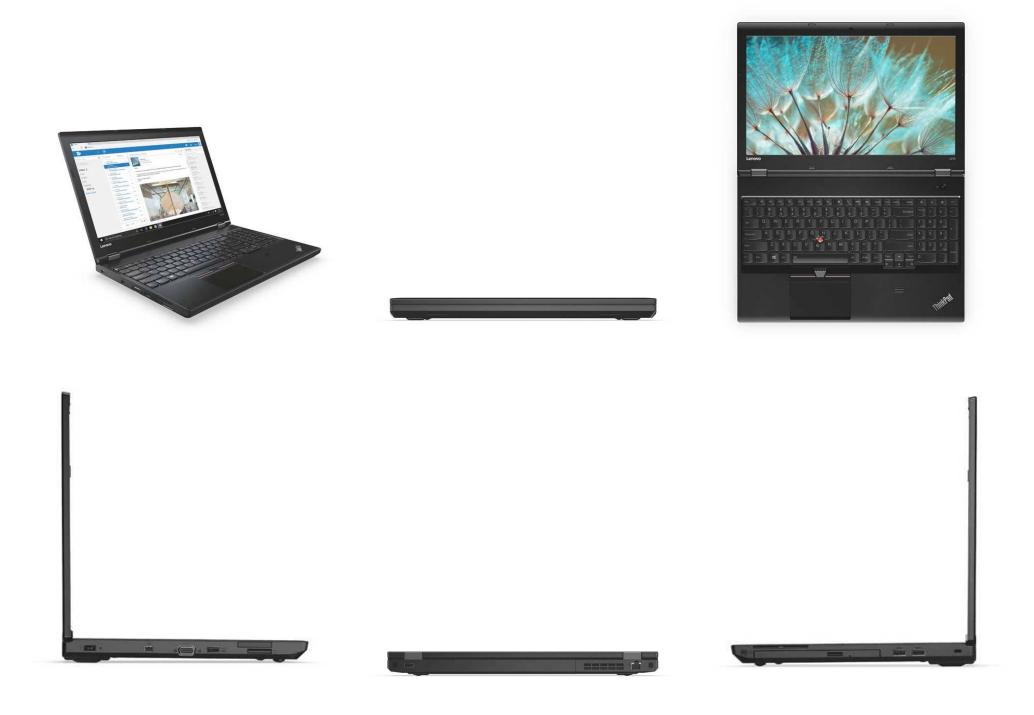
ThinkPad L480 Platform Specifications

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, 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 	
	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)		
	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	
	8th Generation Intel Core i3 / i5 / i7 Processor Processor # of # of Base Max Turbo . Memory Processor								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 2 4 2.2 GHz 3.4 GHz 4MB				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),			
		-8550U 1.8 GHz 4.0 GHz 8MB 3-7130U is NOT available in US and EMEA							1	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.	
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and AMD Radeon 530, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)								Monitor cable (optional)	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical spee HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA. Lenovo USB-C to VGA Adapter	
								OHz (HDMI)	Camera (optional, - Audio support	One of the following, configurable by model: HD720p camera, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec /	
Chipset Memory	32GB max	x / 240	OMHz DE	p) platform DR4, dual-cocessors with	channel cap	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		Security chip Discrete TPM 2.0, TCG Certified vPro (optional) Intel vPro Technology	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							AC adapter	45W or 65W USB Type-C AC adapter	
		Ion-vPro model: Intel Ethernet Connection I219-V (Jacksonville) Pro model: Intel Ethernet Connection I219-LM (Jacksonville)								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	Processo	r or 8th Ger	neration 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		cessor aphics	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		ID 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 i7-8565U	4	8	1.6 GHz 1.8 GHz	4.1 GHz 4.6 GHz	6MB 8MB	DDR4-2400	II .	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	4	8	1.9 GHz	4.6 GHz 4.8 GHz	8MB					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		
Graphics	Intel UHD Graphics 610 or 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon 535, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI) * De HDM (optional) USB (votional) USB (votional) USB (votional) One										* 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 nemory	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-DIMN	A sockets el 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 Resolution Type Surface Brightness Aspect Ratio Ratio Gam.										stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
	14.0" HD (14.0" FHD			N Anti-glare S Anti-glare		16:		45% 45%	90° 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
			<u> </u>	0-finger ge	,					Security Security chip	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, 7r 5" wide, 7n IVMe, PCIe IVMe. PCIe	nm high 3.0 x 4	ctive P	rotection Sy	stem™		System Mgt (opt) Fingerprint reader	Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication		
Optane™ memory Optical	* Installed I	N.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							cksonville) Jacksonville	.)		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter		
WLAN +	One of the	followin	g, configu	rable by mod	el:	,		,			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		
WWAN (optional)			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing		
SIM card	WirelessIntegrateIntegrate* For non-V	WAN ed 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	EA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
Note: The specification	None	n may n	ot bo ava	ilahla in all r	agione						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



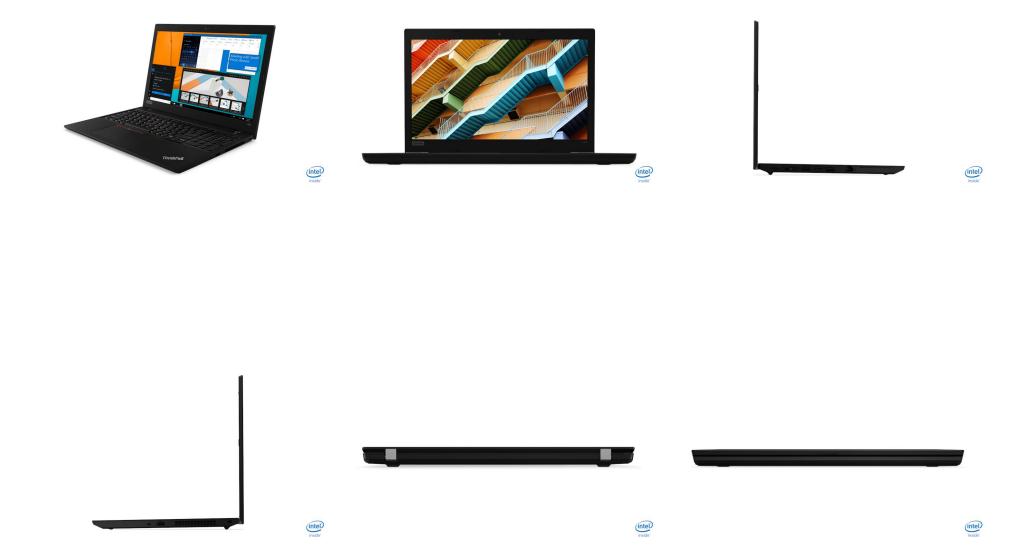






ThinkPad L580 Platform Specifications

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	Cores Threads Frequency Frequency Cache Types Graph 2 2.2 GHz - 2MB Intel HD G 610							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 - 3MB 2.7 GHz - 3MB DDR4-2133 Intel HD Graphic:		SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card				
	i5-7200U		4	2.5 GHz	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 reader Optional: Smart card reader Media 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)	
	Some: HI	DD/S	ATA 6.0G	ab/s, 2.5" w	ide, 7mm h	nigh, Ad	tive Protect	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 310	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		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		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader.						
Graphics	Intel UHD Graphics 610 or 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon 535, 2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI) Intel SoC (System on Chip) platform microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed (optional) Wonitor cable (optional) USB-C to VGA: USB-C to VGA: USB-C to DP: USB-C to DP: Lenovo USB-C to DisplayPort Adapter USB-C to DP: Camera (optional) One of the following, configurable by model: * HD720p camera with ThinkShutter camera privacy, fixed focus													
Chipset Memory	Intel SoC	(Svste	m on Chi	p) platform			wo DDR4 S or 2400MHz o	`	,	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 Recolution Tune Surface Printings Aspect Contrast Color							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			
Storage	SSD / SM.2 228	ATA 6. 0 SSD	0Gb/s, 2. / PCle N	.5" wide, 7r .5" wide, 7n IVMe, PCIe IVMe. PCIe	nm high 3.0 x 4	ctive P	rotection Sy	stem™		System Mgt (opt) Fingerprint reader	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication			
Optane™ memory	* Installed N	N.2 228	0 SSD is I	PCIe 3x4 but	run at PCIe	3x2 due	to M.2 SSD	adapter li	imitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter			
Optical	None	inter e	ptane m	cinory, i Oi	o i v ivio, i	010 0.0	7			Max battery life	MobileMark® 2014: 12 hr			
Ethernet	Non-vPro						cksonville) Jacksonville	۸		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 (Jacksonvinc	·)		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™ (optional)	(NOT av	ailable eless- <i>l</i>	in EMÉ. AC 9260,	۹) 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			
VARIATA NI Zaratia - A			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing			
	WirelessIntegrate* For non-W	WAN ed Mob	upgradal ile Broad	ble Iband 4G L	ΓΕ, Fiboco	m L83(com L8 VWAN ເ	0-EB, M.2 ca 350-GL, M.2 pgradable	ard (EME card	ΞA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			
SIM card Note: The specifica	None	movin	ot be ave	ilable in all r	ogiono						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 Intel UHD Graphics	
	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.

Lenovo August 2019













ThinkPad P1 (2nd Gen) Platform Specifications

Processor	9th Ge	eneral	tion In		re™ i5 /			r or In	tel Xe	on® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm						
	Proces Number		# of Cores	# of Threads	Bas Frequ	se Ma ency Fro	ax Turbo equency	Cache		mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg;						
	i5-9400	OH	4	8	2.5 0	Hz 4	.3 GHz	8MB					Case color	Multi-touch model: starting at 4.0 lb / 1.81 kg Black paint (FHD model) or black weave (UHD model)						
	i7-9750		6	12	2.6 0		.5 GHz	12MB		Ir	itel UHD		Case material	Display cover: CFRP/GFRP hybrid;						
	i7-9850		6	12	2.6 0		.6 GHz	12MB	DDR4	1-2666	630)		Bottom: Aluminum alloy						
	i9-9880	OH	8	16	2.3 0	iHz 4	.8 GHz	16MB	┨	-	4-11110	0		er Optional: Smart card reader						
	E-2276	6M	6	12	2.8 G	GHz 4	.7 GHz	12MB		ır	ntel UHD (P63		Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort),						
Graphics	Intel U NVIDI suppo suppo	IHD G A® Qu rts ex rts fou	araphi adro ternal ur ind	T1000 I digital ı epender	or P630 or T20 monito nt displ) in prod 00, 4GE r via HD ays;	nly or cessor a 3 GDDR 0MI or Th	5 men nunder	rboĺt™;				Monitor cable (optional)	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 sp HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter						
Chipset	Mobile	Intel	CM2	46 Chip	set		,,							USB-C to DP: Lenovo USB-C to DisplayPort Adapter						
Memory	64GB	max /	2666	SMHz DI	DR4, E						ported o	nly on	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable						
	Xeon processor), dual-channel capable, two DDR4 SO-DIMM sockets												Camera (optional	I) One of the following, configurable by model:						
Display	Size F	Resolu	tion		Туре	Surface	Brightr		spect Ratio	Contrast Ratio	Gamut	Viewing Angle	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 /						
	15.6" F	•			IPS A	Anti-glare	300 n	its	16:9	700:1	72% NTSC	170°	Addio Support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack,						
	15.6	Dolby`\		M HĎR	IPS A	Anti-glare	500 r	its	16:9	1200:1	72% NTSC	170°		Dolby Atmos® sound system						
	15.6	Dolby`\	3840x2 /ision	HDŔ	IPS A	Anti-glare			16:9	1200:1	100% Adobe	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad						
	15.6"				OLED	AR, AS	SDR 40 HDR 50 (pea	00niť	16:9	100000:1	100% DCI-P3	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology						
Multi-touch (opt) Pen	anti-re	flection	on (AF	₹), anti-s	smudge	ė (AS) d		_	•		D only), r details		Fingerprint reade	orTouch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None						
Storage	Up to t				p			,	- · · · p - · · ·				Battery	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)						
ŭ				PCIe NV	/Me 3.0) x 4							Max battery life	MobileMark® 2014: 13.8 hr						
RAID (optional) Optical	RAID None	0/1 St	upport	t									AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter						
Ethernet	Native	Intel	Ether	net Con	nection	n I219-\	/ (Non-v	<i>Pro</i>) o	r I219 Cable	-LM (<i>vF</i>	Pro))			n One of the following, configurable by model: • Windows® 10 Home 64						
WLAN Bluetooth™	via bundled or optional ThinkPad Ethernet Extension Cable Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								5.0		ter		1	Windows 10 Pro 64 Windows 10 Pro 64 for Workstations						
WWAN SIM card	None None								- 20111				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						
													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®	Core™	i7 Proces	sor					Dimensions	WxDxH:	12.95" x 8.94" x 0.	70"; 329mm x 227ı	mm x 17.9mm	
		of		Max Turbo	ache	Memory	Proces		Weight	Models	FHD	FHD Low Power	WQHD	
	Number Cores Thro			requency		Types	Graph			Weight	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg	
	i7-8565U i7-8665U 4	× ⊢			BMB C	DR4-2400 In	620		Case color Case material	Black Display co Bottom:	over: PPS / 50% GF PA / 50% GF	;		
Graphics	Intel UHD Graphics 6 NVIDIA Quadro® P52 supports external dig supports three indep Max resolution: 3840	0, 2GĖ ital mo endent)x2160	B GDDR5 i nitor via H displays; @60Hz (U	memory; DMI or USI	٠.	•	DMI)		Smart card reade Media reader Ports	r Optional: MicroSD o Two USB one USB	Smart card reader card reader 3.1 Gen 1 (one Alwa 3.1 Type-C Gen 1 (w	ith the function of Po	ower Delivery and Display ne function of PD and DP	yPort),
Chipset Memory	Intel SoC (System or 48GB max / 2400MH 8GB or 16GB memor * Installed memory is ac	lz DDR v solde	4, dual-ch ered to sys	stemboard.	one DI	DR4 SO-DIM e to Intel limita	MM sock	et		HDMI 1.4 headphor	o, Ethernet (RJ-45), e / microphone com	nano-SIM card slot (bo jack, optional sma	WWAN models),	
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable (optional)	HDMI to \ USB-C to	VGA: Lenovo HDM VGA: Lenovo USB HDMI: Lenovo USB	II to VGA Monitor Ad -C to VGA 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 USB	-C to DisplayPort Ad	apter	
	14.0" FHD (1920x1080) Low Power	IPS	Anti-glare	,	16:9	800:1	72%	170°	- Camera (<i>optional</i>) 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 for				
	FHD (1920x1080) 14.0" ThinkPad Privacy Guard	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	Realtek® ALC3287 eakers, 2W x 2, Dolb		1	3000
	14.0" WQHD (2560x14- Dolby Vision™ HD		1,	500 nits	16:9	1500:1	100% Adobe	170°	Keyboard UltraNav™	6-row, spi	II-resistant, multimed	lia Fn keys, LED bac	,	nad
Multi-touch (opt) Pen	On-cell touch, suppo None	rts 10-1	inger gest	ure (FHD o	nly)				Security	Power-on	password, hard disk	password, supervise	or password, security key	
Storage	 M.2 2280 SSD / SA M.2 2280 SSD / PO M.2 2242 SSD / PO Intel Optane™ Men 	Cle NV Cle NV	Me, PCle : Me, PCle :	3.0 x 2	orogo				Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Intel vPro r Optional:	PM 2.0, TCG Certifi Technology Touch style match of Communication		ader on the palm rest	
Optical	M.2 2280, PCIe N\ None	/Me 3.0) x 4	iiu State St	orage,				Battery Max battery life	MobileMa	<i>rk® 2014:</i> 14.7 hr ´	, supports Rapid Ch	arge (charge up to 80% i	in 1hr)
Ethernet	Non-vPro model: Inte			ection I219- ection I219-					AC adapter	65W UŚB	Type-C AC adapter			
WLAN	Intel Wireless-AC 956	60, Wi-	Fi 2x2 802	.11ac + Blu	etooth	5.0			Operating system Limited warranty		10 Home 64 or Win			
Bluetooth™ WWAN (optional)	 Wireless WAN upgr 	nfigurab adable	le by mode	<u>'</u> :						1-year c3-year/1	lepot repair service -yr battery depot rep -yr battery limited or	pair service		
	 Integrated Mobile E Integrated Mobile E 	roadba Broadba	and 4G LI and 4G LT	⊨, ⊨ibocom E-A. Fiboco	L830-l m L85	=в, м.2 card 0-GL. М.2 ca	ı(⊨MEA ard	only)	Mil-Spec test	MIL-STD-	810G military testino]		
SIM card (opt)	* For non-WWAN mode Nano-SIM card slot,	l, it mea	ns the mod	el is NOT WV	VAN upg	gradable			Environment	EPEAT™	Silver; ENERGY STA	AR® 7.1; RoHS-comp	oliant	
Note: The epocifie	ations above may not be	ovoilo	blo in all ro	gione										Lenovo



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 (ExpressCard/34)			
	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	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Four USB 3.1 Gen 1 (USB 3.0, one Always On), USB Type-C / Thunderbolt 3,				
<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™;	Audio support		on, fixed focus ek® ALC3268 codec / ohone, combo audio/r		'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	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified			
Display							ght, IPS, 250 nits,	vPro (optional)	vPro <i>(optional)</i> Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the palm rest				
						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 lacioi	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 repair service 3-year/1-yr battery depot repair service 				
(-)	 Wireless V 	VAN up	gradable	;					3-year/1-yr battery limited onsite service				
	Integrated Ouglcomm					eless EM745	5) M 2 card	Mil-Spec test MIL-STD-810G military 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	Threads Frequency Frequency Cache Types Graphics		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			9MB	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 keyhol 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 Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card									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.

Lenovo August 2019









ThinkPad P52s Platform Specifications

Processor	8th Genera	tion In	tel® Core	e™ i5 / i7 F	rocessor				Dimensions	WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm											
	Processor	# of	# of	Base Frequency 1.7 GHz 1.8 GHz	Max Turbo Frequency 3.6 GHz 4.0 GHz	6MB	Memory Types DDR4-2400	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 (NVIDIA Qua	Graphic adro® I	cs 620 ir 2500, 20	1.9 GHz n processo GB GDDR	4.2 GHz or and 5 memory;	8MB		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).											
		ree ind tion: 4	depende 096x230	nt displays 04@60Hz	s; (USB Type	,,	*	30Hz (HDMI)		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC).											
Chipset Memory	* System clo	/ 2400 cks dov	MHz DE vn for pro	DR4, dual-o cessors with	channel cap o lower mem	ory conti	oller	SO-DIMM sockets	Monitor cable	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter											
Display) nits, 1	6:9 asp	ect ratio, 7	00:1 contra	ast ratio	170° view	ing angle	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter I) One of the following, configurable by model:											
Multi-touch (opt) Pen	16:9 On-cell touc None	9 aspe ch, sur	ct ratio, oports 10	1000:1 cor 0-finger ge	ntrast ratio, sture (FHD	, 72% ga) only)	amut, 170°	ght, IPŠ, 300 nits, viewing angle	Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /											
Storage	System has a Some: HD Some: SS	D/SA	TA 6.0G	ib/s, 2.5" w	ide, 7mm l	high, Ac	tive Protec	tion System™ SD)	Keyboard UltraNav™	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad											
Optane™ memory Optical		8GB M WWAN	.2 SSD slot as	/ PCIe NVI 2nd Storag	Me, PCIe 3 ge, mutuall	3.0 x 2, ⁻ y exclus	ive with W	WAN	Security Security chip vPro (optional)	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											
Ethernet	Non-vPro n vPro model				nection I21 nection I21				NFC (optional)	anti-spoofing technology Near Field Communication											
WLAN + Bluetooth™	Intel Dual B	Band W	ireless-	AC 8265, V BT4.2 but is	Ni-Fi 2x2 8 limited to B	02.11ac T4.1 by V	+ Bluetoo Vindows OS	th 4.1, M.2 card	Battery Max battery life	Optional integrated Li-ion 32Wh battery and swappable Li-ion 24Wh, 48Wh, or 72Wh battery Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh											
WWAN (optional)	One of the fo				del:				(MobileMark® 2014)	Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3 hr											
	 Integrated 	d Mobi	le Broad	lband 4G L	.TE, EB), M.2 ca	ard (EM	EA only)		AC adapter	* Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter											
	 Integrated 	d Mobi	le Broad	lband 4G L	TÉ-A,	`				n Windows® 10 Home 64 or Windows 10 Pro 64											
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								* For non-WWAN modèl, it means the modél is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card				l, it means the model is NOT WWAN upgradable				Limited warranty	mited 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 specifica	ations observe			ال حادادا:	i				Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant Lenove											













ThinkPad P53 Platform Specifications

Processor	9th Gener	ation I	ntel® Cor	e™ i5 / i7	/ i9 Proce	essor or Ir	ntel Xe	on® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.86" x 9.93" x 0.96-1.16";
	Processor Number	# of Cores	# of Threads	Base Frequen	Max Tu Freque		<u> </u>	mory pes	Proce Grapl			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 GH 2.6 GH	_		_	In	itel UHD	Graphics	Weight	Non-touch model: starting at 5.51 lb / 2.5 kg; Multi-touch model: starting at 6.4 lb / 2.9 kg
	i7-9850H i9-9880H	6 8	12 16	2.6 GH 2.3 GH			—II JI JK	4-2666	630	0	Case color Case material	Black Display cover: Glass-Fiber Reinforced Plastic;
	E-2276M	6	12	2.8 GH	4.7 G	Hz 12ME	3	In	itel UHD P63	Graphics 30	Smart card reade	Bottom: Magnesium/Aluminum er Optional: Smart card reader
Graphics	Intel UHD Graphics 630 or P630 in processor and NVIDIA® Quadro® T1000 (4GB GDDR5), T2000 (4GB GDDR5), RTX 3000 (6GB GDDR6, VR ready), RTX 4000 (8GB GDDR6, VR ready); SUPPORTS external digital monitor via HDMI, Mini DisplayPort, or Thunderbol's supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbol's supports five independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (USB-C or HDMI) Mobile Intel CM246 Chipset 128GB max / 2666MHz DDR4 (ECC function supported only on Xeon procedual-channel capable, four DDR4 SO-DIMM sockets					R6, VR	ınderbol		ExpressCard Media reader Ports	None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole		
Chipset Memory	128GB max / 2666MHz DDR4 (ECC function supported only on Xeon production and production by the second of the secon						rted on	ıly 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 Su	rface Bi	rightness	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 An	i-glare 3	300 nits	16:9	700:1	72%	160°	Bundled Accy	None
		(1920x) y Vision		IPS An	i-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
	Dolby	(3840x y Vision	HDŔ	IPS An		500 nits	16:9	1200:1	100%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 /
	15.6" Dolby	(3840x y Vision -touch	2160) HDR, (OLED A	R, AS	350 nits (peak 100 nits)	16:9	100000:1	100% DCI-P3	170°		dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
Multi-touch (opt) Pen	Capacitive anti-reflect Supports	tion (A	R), anti-s	mudge (rts 10-fir AS) coati	nger gesti	,	• ,			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
Storage	Up to 3 driv • HDD / S • M.2 228	∕es SATA 6.	.0Gb/s, 2	.5" wide,	7mm hig	h, Active					Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Optane™ memory RAID <i>(optional)</i> Optical		Intel C	ptane m				3.0 x 2				Color calibration NFC (optional)	Near Field Communication
Ethernet	Non-vPro vPro mod	model el:	l: Intel Eth Intel Eth	nernet Co nernet Co	nnection nnection	I219-V (I219-LM	Jackso (Jacks	nville) sonville)			Battery Max battery life (<i>MobileMark</i> ® 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
	Intel Wi-Fi Bluetooth							bo adapt	ter		AC adapter	170W or 230W slim tip AC adapter
	 f) Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter al) One of the following, configurable by model: Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 car For non-WWAN model, it means the model is NOT WWAN upgradable 										Operating system	 One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card							Javie			Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
											Mil-Spec test	MIL-STD-810G military testing
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P53s Platform Specifications

Processor	8th G	enerat	ion In	itel® Co	re™	i7 Proces	sor					Dimensions	WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm		
	Proce	er (# of Cores	# of Thread	s Fre	equency 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	IA Qua orts ex orts the esolut	adro® ternal ree in ion: 3	P520, 2 I digital depend 3840x2	2GB mon lent o	displays; 260Hz (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	48GE 8GB	tel SoC (System on Chip) platform 3GB max / 2400MHz DDR4, dual-channel capable, GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM s installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation										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 theo HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter (optional) USB-C to VGA: Lenovo USB-C to VGA Adapter			
Display	Size											Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None		
	15.6"	FHD (1	920x1	080)	IPS	Anti-glare	250 nits	16:9	700:1	45%	170°	Camera (optional)	One of the following, configurable by model:		
	15.6"	UHD (3 Dolby \	3840x2 ∕ision [⊤]	2160) ™ 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		h, su	pports	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	2280	SSD		NVN	le, PCle 3						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Optical	 Inte 	l Opta 2280,	ne™ N		/ H10		id State St	orage				Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology		
Ethernet		/Pro m 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 \	Wireles	ss-AC .0 wire	9560, eless, i	Wi-F ntegr	i 2x2 802 rated in W	.11ac + Blu /i-Fi + Blue	uetoot				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)						e by model	:						Windows® 10 Home 64 or Windows 10 Pro 64		
SIM card (opt)	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card 									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 enesities												Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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

Lenovo August 2019











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 4.8 GHz	12MB 12MB	DDR4-2400	Intel UHD Graphics P630	Smart card reade 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)	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™;	Ports Monitor cable	Four USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical sp Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable				
Chipset Memory	only on Xeon pr * Installed DIMMs	C or 64ĠE 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	Some: 17.3" (439mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 72% gamut, 170° viewing angle Some: 17.3" (439mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% Adobe CG,							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 a Up to 3 drives (tw. Some: HDD)	ewing angl ccessory, o M.2 SSD SATA 6.0	e please see and one HDL 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	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s ory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 RAID 0/1 support None							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 One of the following, configurable by model:				
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 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 Ir	ntel® Cor	e™ i5 / i7 / i	9 Processor	or Inte	l 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 ohics	Weight Case color Case material	Starting at 7.5 lb (3.4kg) Black Display cover: GFRP + PPS;						
	i5-9400H	4	8	8 2.5 GHz 4.3 GHz 8MB			Bottom: Magnesium/Aluminum										
	i7-9750H	6	12	2.6 GHz		12MB			Graphics	Smart card reade	r Optional: Smart card reader						
	i7-9850H i9-9880H	6 8	12 16	2.6 GHz 2.3 GHz		12MB 16MB	DDR4-2666	0	30	ExpressCard	None						
	E-2276M	6	12	2.8 GHz		12MB			Graphics	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	Intel UHD Graphics 630 or P630 in processor and NVIDIA Quadro® P620 (4GB GDDR5), T2000 (4GB GDDR5), RTX 3000 (6GB GDDR6, VR ready), BTX 4000 Max-Q (8GB GDDR6, VR ready), or RTX 5000 Max-Q (16GB GDDR6, VR ready); supports external digital monitor via HDMI or Thunderbolt®; supports five independent displays; two USB 3.1 Type HDMI 2.0, Ethern optional smart ca security keyhole ** Power Delivery on ** Depending on mais supports five independent displays; Monitor cable ** Power Delivery on ** Depending on mais supports five independent displays;										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),						
Chipset	Mobile Inte	el CM2	246 Chips	et :	,,		`	,		1 '	USB-C to DP: Lenovo USB-C to DisplayPort Adapter						
Memory	128GB ma	ax / 26	66MHz D	DR4 (ECC	function su	pported	d only on	Xeon pro	cessor),	Bundled Accy	None						
	* Installed L	nei cap DIMMs a	oabie, fou are actuall	Ir DDR4 SC v 2666MHz I	D-DIMM soc but run at 240	ckets IOMHz d	lue to Intel i	limitation		Camera (optional)	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus						
Display		Size Resolution			ce Brightne	Asp	pect Contra	ast Color	Viewing t Angle	Audio support	• 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) l	PS Anti-gl	are 300 nit	ts 16	3:9 700:	1 72%	160°		dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system						
	17.3" UHD Dolby	(3840xi Vision)	2160) ™ HDR I	PS Anti-gl	are 400 nit	ts 16	6:9 1000:	1 100%	170°	Keyboard	6-row. spill-resistant, multimedia Fn keys, numeric keypad, LED backlight						
Multi-touch Pen	None None									UltraNav™	3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad						
Storage Optane™ memor RAID (optional)	 HDD / S M.2 228 y Optional: 	ATA 6. 0 SSD Intel C	.0Gb/s, 2. / PCIe N Optane m	IVMe, PCIe	nm high, Ac 3.0 x 4			/stem™		Security Power-on password, hard disk password, supervisor password, security Security chip Discrete TPM 2.0, TCG Certified Intel vPro Technology Fingerprint reader Touch style match on chip fingerprint reader on the palm rest Color calibration Optional: X-Rite Pantone factory color calibration (UHD model only)							
Optical	None	suppor	ı							Color calibration NFC (optional)	Near Field Communication						
Ethernet					nection I219 nection I219					Battery Max battery life	Integrated Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 7 hr; Hybrid mode: 10 hr **Retroy life varies in file and the office of the following states of the f						
WLAN Bluetooth™					1ax + Blueto Wi-Fi + Blue			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						
											Wile GTB GTGG Hilling						









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	ımber Cores Threads Frequency Frequency Cache Types Graphics				(00000000000000000000000000000000000000	 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	-6500U 2 4 2.5 GHz 3.1 GHz 4MB DDR4-2133 520			SIM card (opt)	Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card									
	7th General	tion In	tel Core	2.6 GHz i3 / i5 / i7		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			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 Graphics 520 or 620 in processor only, or Intel HD Graphics 620 in processor and NVIDIA GeForce® 940MX, 2GB 2.5GHz GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays;								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	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)						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-c	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	58), 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					
	220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 or 500:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle								Security Security chip vPro (optional) 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 (optional) Internal battery	Near Field Communication Optional: Integrated Li-Polymer 3-cell (24Wh) Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)					
Storage	Some: HD	D/SA	TA 6.0G	ib/s, 2.5" w	ide, 7mm hi	igh, Acti	ive Protect	tion System™	External battery						
	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	n 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						l.2 card c + 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	ted warranty One of the following, configurable by model: 1-year depot repair service					
Bluetooth™					Wi-Fi + Blue					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® 6.1; RoHS-compliant					
Note: The specific	ations above r	may no	ot be ava	ilable in all	regions.					Lenovo					



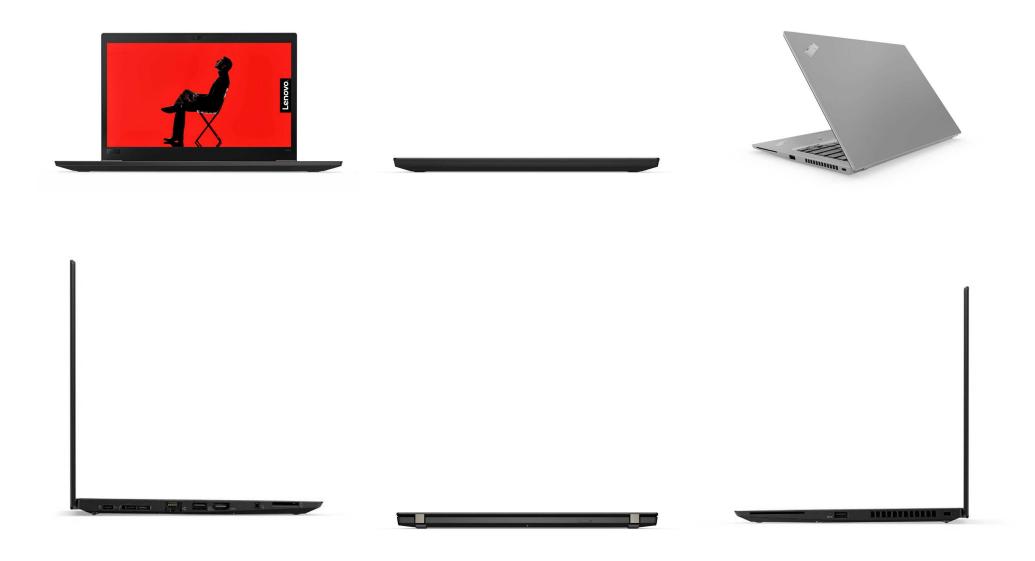
ThinkPad T470s Platform Specifications

Processor	Processor 6th Generation Intel® Core™ i5 / i7 Processor							WxDxH: 13.03" x 8.93" x 0.67-0.74"; 331mm x 226.8mm x 16.9-18.8mm				
	Number Cores Threads Frequency Frequency Cache Types G i5-6200U 2.3 GHz 2.8 GHz 3MB				Types	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	2.6 GHz	3.4 GHz 4MB	DD114-2130	520	Media reader	er <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)				
	or 7th Generation In	# of			Mamari	Drosses	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 Th	hreads F	requency	Max Turbo Frequency Cache	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	4	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.1 GHz 3MB 3.5 GHz 3MB 3.5 GHz 4MB 3.9 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				
0 1:							Camera (optional	I)HD720p resolution, fixed focus (models without camera are NOT available in EMEA)				
Graphics	Intel HD Graphics 5 supports external d supports three inde	digital mo ependent	nitor via l displays:	HDMI or USB Ty	'		Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack				
Chipset	Max resolution: 409			USB Type-C); 4	096x2160@	24Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Memory	20GB or 24GB max 4GB or 8GB memo * System clocks down	x ⁷ / 2400 pry soldei	MHz DDF red to sys	temboard, one l	DDR4 SÓ-D	IMM socket	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology				
Display		3:9 aspec	ct ratio, 70	00:1 contrast rat	io, 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" (355n 300 nits, 16 On-cell touch, supp	3:9 aspec	ct ratio, 70	00:1 contrast rat	o, 160° view	klight, IPS, ving angle	Internal battery Max battery life	Front Li-Polymer 3-cell (23Wh) and rear Li-ion 3-cell (26Wh), both Integrated MobileMark® 2014: up to 10.5 hr * Battery life varies significantly with settings, usage, & other factors				
Storage	One of the following, of M.2 SSD / SATA 6	6.0Ğb/s ((e.g. xxxC	BB SSD M.2)			AC adapter Operating system	45W slim tip AC adapter, 45W or 65W USB Type-C AC adapter One of the following, configurable by model:				
Optical	 M.2 SSD / PCIe N None 	NVMe, P	Čle 3.0 x	4, 32Gb/s (e.g.:	xxxGB SSD	M.2 PCIe NVMe)		 Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64 				
Ethernet	Non-vPro model: In vPro model: In			nection I219-V (J				Windows 10 Home 64Windows 10 Pro 64				
WLAN	One of the following, of Intel Dual Band Work Intel Dual Band Work Intel Tri-Band Wire	configurab Vireless-A Vireless-A	ale by mode AC 8260, AC 8265,	el (WiGig is mutua Wi-Fi 2x2 802.1 Wi-Fi 2x2 802.1	ly exclusive w 1ac + BT4.1 1ac + BT4.1	, M.2 card , 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				
Divists at laTM	M.2 card		•	J		·	Mil-Spec test	MIL-STD-810G military testing				
Bluetooth™	Bluetooth 4.1 wirele * Intel 8265ac / 18265	5ac card s	upport BT4	1.2 but is limited to	BT4.1 by Win	dows OS	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
WWAN (optional) SIM card (opt)	One of the following, c • Wireless WAN up • Integrated Mobile Qualcomm® Snap • Micro-SIM card sl	ogradable Broadba odragon ^T	e and 4G L ^T M X7 LTE	ΓΕ-Α, -A (Sierra Wirele	ess EM7455), M.2 card						
Olivi Cara (Opt)	IVIIOIO OIIVI CAIU SI	iot, opt v	CHZOH EI	L (30) of Leflov	o oomidet	(LIVILA) ONVI CAIU		Lenovo				



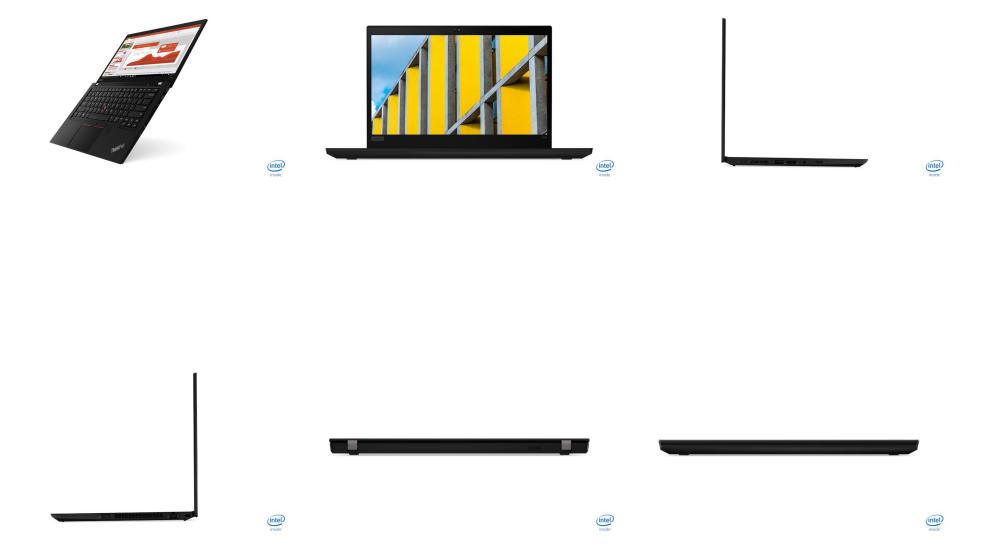
ThinkPad T480 Platform Specifications

Processor	7th Gener	ration I	ntel® Cor	e™ i5 Proc	essor				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			4Wh + 24Wh		2Wh, or 24Wh +			
	Number	Cores	Threads		Frequency		Types	Graphics		Integrated N			/ 1.58 kg		3.92 lb / 1.78			
		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 con Bottom:		esium Hybr -Fiber Reint		tic				
	i5-8250U i5-8250U i5-8350U i7-8550U	4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620	Smart card reade Media reader Ports	4-in-1 read Two USB 3 one USB 3	er (MMC, 8 8.1 Gen 1 (8.1 Type-C (SD, SDHC, one Always Gen 1 (with	er DHC, SDXC)					
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory (discrete graphics is available only on i7 models in EMEA); supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)								Monitor cable (optional)	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 theory thin to VGA: Lenovo HDMI to VGA Monitor Adapter					,			
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									 mera (optional) One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed forms IR camera and HD720p camera, fixed focus dio support HD Audio, Realtek® ALC3287 codec / 					ixed focus			
Display	Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS,						•	Addio Support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack									
							ewing angle cklight, IPS,	Keyboard UltraNav™							touchpad			
Multi-touch (opt)	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle On-cell touch, supports 10-finger gesture (FHD only)								Security Power-on password, hard disk password, supervisor password, security ke Discrete TPM 2.0, TCG Certified Intel vPro Technology						ırity keyhole			
Storage	System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD)									ingerprint reader Optional: Touch style match on chip fingerprint reader on the keybo anti-spoofing technology					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	Battery 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)	Models Integrated n		th 48Wh nr 14.4 hr nr 13.2 hr	21.8 hr	Wh + 24Wh 14.4 hr 13.6 hr	24Wh + 48Wh 21.8 hr 19.8 hr	24Wh + 72Wh 29.0 hr 26.4 hr		
Optical Ethernet	None Non-vPro vPro mod						icksonville) Jacksonville	<u> </u>	AC adapter	* Battery life	varies signi	ficantly with se-C AC ada	settings, usa			20.4 111		
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)	WWAN (optional) One of the following, configurable by model (mutually exclusive with Intel Optane memory): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)							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										
	 Integrate 	ed Mob	oile Broad	dband 4G L	TÉ-A,	•	• • • • • • • • • • • • • • • • • • • •		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 *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card					Environment	EPEAT™ G	iold (US or	nly); ENERG	GY STAR® (6.1; RoHS-	compliant						



ThinkPad T480s Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions	<i>WxDxH:</i> 13.03" x 8.93" x 0.73"; 331mm x 226.8mm x 18.45mm					
	Processor # of # of Base Max Turbo Cache Types Graphics		Starting at 2.9 lb / 1.32 kg Black or Silver					
	i5-720011 2.5 GHz 3.1 GHz 3MB Intel HD Graphics		Display cover: CFRP Hybrid; Bottom: Magnesium					
	i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB DDR4-2133 Inter 15 Graphics 620		Bottom: Magnesium r Optional: Smart card reader					
	or 8th Generation Intel Core i5 / i7 Processor	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
	Processor # of # of Base Max Turbo Cache Number Cores Threads Frequency Frequency Cache Types Graphics		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),					
	i5-8250U 1.6 GHz 3.4 GHz 6MB		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 DDR4-2400 Intel UHD Graphics		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,					
	1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 8MB 620		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		* Depending on many factors, actual data transfer speed may be lower than theoretical speed					
arapinios	Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150,	Monitor cable (optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter					
	2GB GDDR5 memory (discrete models are NOT available in EMEA); supports external digital monitor via HDMI or USB Type-C;	Camera	One of the following, configurable by model:					
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)		 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus 					
Chipset	Intel SoC (System on Chip) platform	Audio support	HD Audio, Realtek® ALC3287 codec /					
Memory	20GB or 24GB max / 2400MHz DDR4, dual-channel capable, 4GB or 8GB memory soldered to systemboard, one DDR4 SO-DIMM socket		stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack					
	* System clocks down for processors with lower memory controller	UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight					
Display	Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle,		TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
	supports ThinkPad Privacy Guard on some models		Power-on password, hard disk password, supervisor password, security keyho Discrete TPM 2.0, TCG Certified					
	Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut,		Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest,					
	170° viewing angle	• .	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 Name		MobileMark® 2014: 15.6 hr * Battery life varies significantly with settings, usage, & other factors					
Ethernet	None Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)	AC adapter	45W or 65W USB Type-C AC adapter					
Ethernet	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64					
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS		One of the following, configurable by model: 1-year depot repair service					
WWAN (optional)	·······································		1-year depot with 2-year planar repair service					
, at (optional)	Wireless WAN upgradable		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 					
	 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) 		MIL-STD-810G military testing					
	Integrated Mobile Broadband 4G LTE-A.	l'	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant					
SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card		•					
Note: The constitution	ations above may not be available in all regions		Longvo					



ThinkPad T490 Platform Specifications

Processor	8th G				e™	i5 / i7 Pr	1					Dimensions	WxDxH:		, 	m x 227mm x 17.9mm	1
	Proce		of	# of		Base	Max Turbo	ache	Memory	Proce		Weight	Models	HD	FHD	FHD Low Power / WQHD	
	Numb i5-826		ores	ınreads	_		requency	6MB	Types	Grapl	nics	Coop color	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
	i5-826				-			3MB		ntel UHD	Graphice	Case color Case material	Black <i>Display c</i>	over: PPS / 50	0% GF∙		
	i7-856		4	8	-			BMB [DDR4-2400	62		Jaco materia.				loy (with ISO 22196 cor	npliant
	i7-866				-			BMB					D-#	anti-mic	robial surface tre	atment for 20Q9 / 20QH	I models only);
	or 10t	h Gene	ration	n Intel	Core	e i5 / i7 P	rocessor (N	OT av	ailable in E	MEA)			Bottom:	PA / 50%		20 / 20011	
	Proce	ssor #	of	# of		Base I	Max Turbo	acha	Memory	Proce	ssor	- Smart card reade RFID reader				09 / 20QH models) Y for ALL 20Q9 / 20QH	models)
	Numb	er C	ores 7	Threads	Fre	equency I	Frequency	ache	Types	Grap	hics	Media reader	MicroSD	card reader	,	101 /122 2000 / 2001	modele)
	i5-102		4	8	-	.6 GHz		6MB	DDR4-2400 I	Intel UHD	Graphics	Ports	Two USB	3.1 Gen 1 (one	Always On),	ion of Davis Dalivens	ad Diamlas (Daut)
	i7-105	100			1	.8 GHz	4.9 GHz	BMB					one USB	3.1 Type-C Gen	2 / Thunderbolt :	ion of Power Delivery ar	nd DisplayPort), D and DP)
Graphics							Graphics in			r			one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DF HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN model), 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				
							Graphics in OR5 memor		ssor and								
							IDMI or Thu		olt;				* Dependii	card reader, side	e docking connec s, <i>actual data transf</i> e	ctor, security keynole er speed may be lower thar	theoretical speed
						displays;			0.40000	411 (115)		Monitor cable	HDMI to	VGA: Lenovo	HDMI to VGA Mo	nitor Adapter	,
Object						,	hunderbolt); 409	bX2160@24	4HZ (HDI	VII)	(optional)			USB-C to VGA A USB-C to HDMI		
Chipset Memory	Intel S	00 (S)	/stem 24001	I on Ch	ıp) l	platform	annel capa	hla							USB-C to Display		
Wellioly							stemboard,		DR4 SO-DI	IMM sock	ĸet	Bundled Accy	None			,	
	* Insta	lled mei	nory is	s actual	y 26	666MHz bu	t run at 2400	MHz dı	ie to Intel limi	itation		Camera (optional					
Display	Siza	Resoluti	on	l-	ype	Surface	Brightness	Aspec		Color	Viewing	1	• HD720	p camera with TI	hinkShutter came	era privacy, fixed focus nkShutter camera priva	ov fixed feetie
								Ratio	Ratio	Gamut		Audio support	HD Audio	o, Realtek® ALC3	3287 codec /	ilkonuller camera priva	cy, lixed locus
	14.0	HD (136	6X/68	5)	IIN	Anti-glare	220 nits 250 nits	16:9	400:1	45%	90°	-			Dolby [®] Audio [™] F		
	14 0"	FHD (19	20v10	190/*	DC	Anti-glare	(non-touch)	16:9	700:1	45%	170°			· '		e / microphone combo ja	ack
	14.0	ווט (וו	20010	,60)	-3	Anti-giale	300 nits (multi-touch)	10.9	700.1	45 /6	170	Keyboard UltraNav™				optional LED backlight Mylar surface multi-tou	ch touchnad
	14.0"	FHD (19	20x10	080)	PS	Anti-glare	<u>'</u>	16:9	800:1	72%	170°	Security	Power-on	password, hard	disk password, s	supervisor password, se	<u> </u>
	-	=HD (19		080)								Security chip System Mgt (opt)	Discrete	TPM 2.0, TCG C	ertified		
	14.0"	Γhink̀Pa			PS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Fingerprint reade	r Optional:	Touch style ma	tch on chip finger	rprint reader or	
		Guard*	2560	(1440)						1000/				FIPS 201 finge	rprint reader on p	alm rest	
	14.0"	HDR, D	,∠ooux olbv Vi	(1440) ision™	PS	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	NFC (optional)			port via RFID rea		
Multi-touch (opt)					0-fi	nger ges	ture (FHD o	nly)	OU modele	model		Battery Max battery life	MobileMa	ark® 2014: 16.1	1 hr	Rapid Charge (charge up	o to 80% in 1hr)
Storage				SATA			ranable for 20	\Q3 / Z(ogi i illouela i	moder		AC adapter	- Battery I 45W 65V	<i>lite varies significal</i> V. or 65W slim U	ntily with settings, us ISB-C AC adapte	sage, & other factors	
Sidiage						Me, PCIe	3.0 x 4					Operating system		·			
	• M.2	2242 \$	SSD/	PCIe I	۱۷N	le, PCle	3.0 x 2					(optional)		ws® 10 Home 64			
				lemory NVMe			olid State St	orage,						ws 10 Pro 64			
Optical	None	2200,	i Ole	INVIVIC	5.0	7 7						11. 11. 1		ws 10 Pro in S n			
Ethernet		Pro m	odel:	Intel Et	her	net Conn	ection I219	V (Jac	ksonville)			Limited warranty		following, configui depot repair serv			
		nodel:					ection I219-)					ır planar repair se	ervice	
WLAN +						e by mode							 3-year/1-yr battery depot repair service 				
Bluetooth™	al) • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 (AX201 for 10th Gen processor only) Mil-Spec test MIL-STD-810G military testing Environment FPFAT™ Silver: ENFRGY STAR® 7.1: BoHS-co																
(optional)								Mil-Spec test									
WWAN (optional)								Environment	EPEAT™	Silver; ENERGY	/ STAR® 7.1; Roh	IS-compliant					
	Wireless WAN upgradable																
							E, Fibocom				A only)						
	• Inte	grated	wobil Mobil	e Broa	uba dha	na 4G Ll nd 4G LT	E-A, Fiboco E-A, Fiboco	m L85	0-GL, M.2 (cara ∩ 4y4 M	2 card						
	* Only	non-W	VAN a	nd WW	4Ν ι	ıpgradable	are available el is NOT W	on 200	Q9 / 20QH m	nodels	caru						
SIM card (ant)																	
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card tions above may not be available in all regions.								J								Lenov



ThinkPad T490s Platform Specifications

Processor	8th Generation Ir	ntel® Cor	'e™ i5 / i	i7 Proce	essor					Dimensions	WxDxH (b	black with FHD / I			
		# of Threads	Base Frequer	ncy Fred	Turbo quency Cac	ne Ty	emory ypes	Proce: Graph			,	black with FHD Lo 12.94" x	8.90" x 0.66"; 329.0mm x 2 ow <i>Power / WQHD):</i> 8.89" x 0.63"; 328.8mm x 2	225.8mm x 16.1mm	
	i5-8265U i5-8365U i7-8565U i7-8665U	8	1.6 GF 1.8 GF 1.9 GF	Hz 4.1	9 GHZ 6M 1 GHz 6M 6 GHz 8M 3 GHz 8M	B DDR	R4-2400	ntel UHD (620	Graphics 0	Weight	Models	Black with FHD	8.92" x 0.68"; 329.15mm x Black with FHD Low Power / WQHD / Privacy Guard	Silver	
0		: 000 :			S GITZ OIVI	ь				Case color	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 independe	monitor [.] ent displ	via ĤDN avs:		,	160@24	.Hz (HDN	MI)	Case material Smart card reade	Bottom:	over: CFRP Hyb Magnesium		er);	
Chipset Memory	Intel SoC (System on Chip) platform 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sock * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation Aspect Contrast Color									Media reader Ports	MicroSD of Two USB one USB	card reader 3.1 Gen 1 (one A 3.1 Type-C Gen	Nways On), ((with the function of Power	Delivery and DisplayPo	
Display	Size Resolution	1	Гуре Su	ırface l	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models),				
	14.0" FHD (1920x1	1080)	IPS Anti	i-giare \	250 nits (non-touch) 300 nits multi-touch)	16:9	700:1	45%	170°	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 spe HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter				
	14.0" FHD (1920x1 Low Power	1080)	IPS Anti	i-glare	400 nits	16:9	800:1	72%	170°	(optional) Bundled Accy	USB-C to	DP: Lenovo U	ISB-C to DisplayPort Adapte	er O	
	FHD (1920x1 14.0" ThinkPad Pri Guard	1080) ivacy	IPS Anti	i-glare	400 nits	16:9	1000:1	72%	170°	Camera	Optional: ThinkPad Ethernet Extension Adapter Gen 2 One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus				
	14.0" WQHD (2560 HDR, Dolby V		IPS GI	lossy	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	HD Audio	, Realtek® ALC32		mera privacy, fixed focu	
Multi-touch (opt)	On-cell touch, su	ipports 1	0-finger	gesture	e (FHD only	′)				'	stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack				
Storage	M.2 2280 SSDM.2 2280 SSDM.2 2242 SSD	/ PCIe N	VMe, P	Cle 3.0						Keyboard UltraNav™	6-row, spi	II-resistant, multir	media Fn keys, optional LED and buttonless Mylar surface) backlight	
Optical	• Intel Optane™ M.2 2280, PCI None	Memory	H10 wit			ige,				Security Security chip System Mgt (opt)	Discrete T Intel vPro	「PM 2.0, TCG Ce Technology			
Ethernet	Native Intel Ethe	rnet Con	nection	I219-V	(<i>Non-vPro</i>)	or I219	9-LM (<i>vP</i>	Pro)		Fingerprint reader NFC <i>(optional)</i>		Touch style mated Communication	ch on chip fingerprint reader	on the palm rest	
WLAN + Bluetooth™ <i>(optional)</i>	One of the following Intel Wireless-A Intel Wi-Fi 6 AX	<i>g, configu</i> AC 9560, K200, Wi	rable by r Wi-Fi 2 -Fi 2x2 8	<i>model:</i> x2 802. 302.11a	11ac + Blue	etooth 5				Battery Max battery life AC adapter	MobileMa * Battery li	<i>rk® 2014:</i> 20 hr	ly with settings, usage, & other f		
WWAN (optional)	One of the following	g, configu	rable by r	model:						Operating system			ome 64 or Windows 10 Pro 6	64	
SIM card (opt)	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EME Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card 							d (EMEA ard	only)	Limited warranty	1-year d1-year d3-year/1	following, configural depot repair servion depot with 2-year l-yr battery depot l-yr battery limite	ce planar repair service repair service		
										Mil-Spec test	MIL-STD-	810G military tes	ting		
										Environment	EPEAT™	Silver; ENERGY	STAR® 7.1; RoHS-complian		



ThinkPad T495 Platform Specifications

Processor	AMD Ryzer	ı™ PR0	O Mobile	Processo	rs with Ra	deon™ Ve	ega Graphics	;		Dimensions	WxDxH: 1	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 3 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		er: PPS / 50%	GF;	
	Ryzen 5 Pro 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Grap		0	Bottom:	PA / 50% G	•	
	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 car One USB 3.	d reader 1 Gen 1 (Alway	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 (I	HDMI)			HDMI 2.0, Enheadphone / microSD car	thernet (RJ-45 / microphone c d reader, side), nano-SIM card sombo jack, optional 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 (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMN* Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitati								ĸet	Monitor cable (optional) Bundled Accy	HDMI to VG, USB-C to VC USB-C to DI None	A: Lenovo H GA: Lenovo U P: Lenovo U	DMI to VGA Monit SB-C to VGA Ada SB-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 foll HD720p ca	<i>lowing, configura</i> amera with Thi	ble by model: nkShutter 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	and HD720p o	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 speak dual array fa	r-field microph	olby® Audio™ Pre one, headphone /	microphone combo jack
	14.0" FHD (1	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 pa	assword, hard o	disk password, sup	pervisor password, security keyhole
	• M.2 2280				()	· · · · · · · · · · ·				Security chip System Mgt	DISCRETE THE DASH Mana	M 2.0, TCG Ce	rtified	
J	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® RTL8111 Gigabit Ethernet connection									Max battery life	MobileMark® * Battery life v	[®] <i>2014:</i> 13.4 h varies significanti	nr ly with settings, usag	e. & other factors
WLAN Bluetooth™	Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter							ter		AC adapter	45W or 65W	/ USB Type-C /	AC adapter	
	One of the fo				del:		·						Windows 10 Pro 6	4
	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable 									Limited warranty	 1-vear dep 	<i>lowing, configura</i> oot repair servior r battery depot	ce	
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card						Mil-Spec test		0G military tes					
									Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			-compliant		

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

Lenovo July 2019



ThinkPad T495s Platform Specifications

Processor	AMD Ryze	en™ PF	RO Mobi	ile Pr	ocessors	s with Rad	eon™ Ve	ga Graphics	5		Dimensions	WxDxH (I	FHD / Privacy G			
	Processor		# of			/lax Turbo	Cache	Memory	Proce			WxDxH (12.95" : Low Power):	k 8.90" x 0.66"	; 329.0mm x	226.15mm x 16.7mm
	Number Ryzen 5		Threads		`	requency	MB L2 /	Controller	Grap Radeon			TTADAIT (I		x 8.89" 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		ow Power	FHD Privacy Guard
	Ryzen 7	4	8	2.3	GHz -		MB L2 /	DDR4-2400	Radeon	Vega 10	0	Weight	2.92 lb / 1.33 kg	2.76 lb	/ 1.25 kg	2.89 lb / 1.31 kg
	Pro 3700U						4MB L3		Grap	nics	Case color Case material	Black	over: CFRP Hv	hrid:		
Graphics	AMD Rad supports to supports to	externa	al digital	mon	itor via Ċ			;			Smart card reade	Bottom:	Magnesiu	m/Aluminum		
						JSB-C); 4	096x216	60@24Hz (I	HDMI)		Media reader	MicroSD	card reader		100 0 1 0	_
Chipset Memory	AMD SoC (System on Chip) platform 8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation Circ Passilvities Time Systems Printhness Aspect Contrast Color								Ports	two USB HDMI 2.0), Ethérnet exten	2 (with the fur sion connecto	nction of Powe r, nano-SIM c	er Delivery and DisplayPor ard slot (WWAN models),		
Display				Í			Aanaa			Viewing	i	neadphor microSD	ne / microphone card reader, side	сотро јаск, о e docking conr	ptional smart nector. securit	card reader, v kevhole
,	Size Reso	olution		Туре	Surface	Brightnes	Ratio		Gamut		Monitor cable	* Dependir	ng on many factors VGA: Lenovo	, actual data trai	nsfer speed ma	y be lower than theoretical spe
	14.0" FHD	(1920x	1080)	IPS	Anti-glare	300 1118	/ 16:9	700:1	45%	170°	(optional) Bundled Accy	USB-C to Optional:	VGA: Lenovo ThinkPad Ether	USB-C to VGA net Extension	Adapter	
	14.0" FHD	(1920x Power	1080)	IPS .	Anti-glare	(multi-touc	1	800:1	72%	170°	- Camera	Optional: ThinkPad Ethernet Extension Adapter Gen 2 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 for				
		(1920x kPad Pr		IPS .	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	era and HD720p), Realtek® ALC3 eakers, 1W x 2, y far-field microp	3287 codec / Dolby® Audio™	[™] Premium /	
Multi-touch (opt)	On-cell to	uch, sı	upports	10-fir	nger ges	ture (FHD	only)				 Kevboard		ill-resistant, mult		<u> </u>	
Storage Optical	M.2 2280 None	SSD /	PCIe N	VMe,	, PCle 3.	.0 x 4					UltraNav™	TrackPoin	nt® pointing devic	e and buttonle	ess Mylar surfa	ace multi-touch touchpad
Ethernet	Native Inte	el Ethe	rnet Co	nnec	tion I219	9-V (Non-v	<i>Pro</i>) or I	219-LM (<i>vF</i>	Pro)		Security Security chip	Discrete 7	TPM 2.0, TCG C		u, supervisor	password, security keyhole
140,451,7,7								dapter Gèn	2		System Mgt Fingerprint reade	DASH Ma : <i>Ontional</i>	anagement Touch style ma	tch on chip fine	gerprint reade	er on the palm rest
WLAN <i>(optional)</i> Bluetooth™	Intel Wirel Bluetooth							5.0 ombo adapi	er		NFC	None		p	9	
WWAN (optional)	One of the • Wireless	followin	g, config	<i>urable</i> able	by mode	el:		·			Battery Max battery life	MobileMa	d Li-ion 57Wh ba ark® <i>2014:</i> 16.4 life varies significar	hr	,	ge (charge up to 80% in 1h
	Integrate * For pop-1/2	ed Mok	oile Broa	adbar	nd 4G LT	E-A, Fibo	com L85	0-GL, M.2 o	ard		AC adapter	45W or 6	5W USB Type-C	AC adapter	, usage, a ome	10000
SIM card (opt)		* For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card						Operating system	Optional:	Windows® 10 H	lome 64 or Wii	ndows 10 Pro	64			
											Limited warranty	• 1-year o	following, configur depot repair serv 1-yr battery depo	rice	e	
											Mil-Spec test		-810G military te			
									Environment							









ThinkPad T580 Platform Specifications

Processor	7th Generation Ir	ntel® Cor	e™ i5 Proce	essor				Dimensions	WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor # of Number Cores	# of	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight	Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg
	i5-7200U i5-7300U 2	4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics	Case color Case material	Black Display cover: Glass-Fiber Reinforced Plastic (PPS);
	or 8th Generation	n Intel Co			OIVID		1	Smart card roads	Bottom: Glass-Fiber Reinforced Plastic er Optional: Smart card reader
	Processor # of	# of	Base	Max Turbo Frequency	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 i5-8350U i7-8550U i7-8650U	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole
Graphics	Intel HD Graphic Intel HD Graphic NVIDIA® GeForce	s 620 or	Intel UHD (Graphics 62	20 in p			Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	supports externa supports three in Max resolution: 4	l digital r depende 4096x23	nonitor via ent displays 04@60Hz (HDMI or U: ; USB Type-	SÉ Typ	•	BOHz (HDMI)	Camera (optional) Audio support	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 /
Chipset Memory	Intel SoC (Syster 32GB max / 2400 * System clocks do	MHz DE	ÒŔ4, dual-c	hannel cap	able, t	wo DDR4 S roller	O-DIMM sockets		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Display		16:9 asp	ect ratio, 70	00:1 contra	st ratio	, 170° viewi	ng angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	On-cell touch, su	ect ratio, pports 1	1000:1 con 0-finger ge	trasť ratio, sture (FHD	72% g only)	amut, 170°	ht, IPS, 300 nits, viewing angle	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Storage	System has one HL Some: HDD / Si Some: SSD / Si	ATA 6.0G ATA 6.0G	Gb/s, 2.5" w Gb/s, 2.5" wi	ide, 7mm h de, 7mm h	igh, Ad igh (e.	ctive Protect	ion System™ SD)	NFC (optional)	r Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology Near Field Communication
	Some: M.2 SSD Some: 128GB N in WWAN	N.2 SSD I slot as	/ PCIe NVN 2nd Storag	/le, PCIe 3. e, mutually	0 x 2, exclus	sive with WV	VAN	Battery Max battery life	Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery Models 24Wh 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh
Optane™ memory Optical	Optional: Intel O None	ptane m	emory, PCĬ	e NVMe, P	Cle 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 * Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro model: vPro model:					icksonville) Jacksonville)	AC adapter	45W or 65W USB Type-C AC adapter
WLAN + Bluetooth™	Intel Dual Band V * Intel 8265ac card						h 4.1, M.2 card	Limited warranty	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
, , ,	 I) 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, 								 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
	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card			Mil-Spec test	MIL-STD-810G military testing				
SIM card (opt)	* For non-WWAN modèl, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card							Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant



ThinkPad T590 Platform Specifications

Processor	8th Ge	enerat	ion Ir	itel® Core	e™ i5 / i	7 Prod	essor						Dimensions	<i>WxDxH:</i> 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
	Proces Numbe	er C	# of Cores	# of Threads	Base Frequen		ax Turbo equency	Cache	Memory Types		Process 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;
	i5-8265 i5-8365 i7-8565 i7-8665	5U 5U	4	8	1.6 GH 1.6 GH 1.8 GH 1.9 GH	z 4 z 4	.1 GHz .6 GHz	6MB 6MB 8MB 8MB	DDR4-2400	Intel	l UHD Gi 620	aphics		Bottom: PA / 50% GF r Optional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On).
	Intel U NVIDIA suppor suppor	IHD G A® Ge rts ext rts thr	iraphi Force terna ee in	l digital n depende	n proces 0, 2GB nonitor v	sor a GDDF /ia HE avs;	nd R5 memo IMI or Th	underb	olt; 6x2160@	24Hz	z (HDMI)	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
Chipset Memory	48GB 8GB o	ntel SoC (System on Chip) platform .8GB max / 2400MHz DDR4, dual-channel capable, .GB or 16GB memory soldered to systemboard, one DDR4 SO-DIN .Installed memory is actually 2666MHz but run at 2400MHz due to Intel limita										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 F	Resolu	tion	Ty	ype Sur	face	Brightness	Aspec	t Contras	st (Color V Samut A	Angle	- Camera (<i>optional</i> , - Audio support	 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 HD Audio, Realtek® ALC3287 codec /
	15.6" F	•			PS Anti- PS Anti-		250 nits 500 nits	16:9 16:9	700:1 1200:1	, 1	1000/	170° 170°		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Multi-touch (opt)					0-finger	gestu	re (FHD	only)	1		laobe		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.2Intel M.2	2280 2242 Opta	SSD SSD ne™ l	/ SATA 6 / PCIe N / PCIe N Memory e NVMe 3	IVMe, P IVMe, P H10 wit	Cle 3		torage	,					Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Optical Ethernet	None	Dro m	nodol:	Intol Eth	ornot C	onno	otion 1910	V (la	cksonville)	\			Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
	vPro n	nodel:	:	Intel Eth	nernet C	onne	ction I219	-LM (J	acksonville				Max battery life	MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics) * Battery life varies significantly with settings, usage, & other factors
WLAN <i>(optional)</i> Bluetooth™	Blueto	oth 5.	.0 wir	eless, int	n-Fi 2x2 tegrated	in Wi	11ac + Bl -Fi + Blue	tooth	ombo ada	apter			AC adapter	45W or 65W USB Type-C AC adapter
WWAN (optional)	One of	the fol	llowing	g, configur upgradat	rable by n	nodel:							Operating system Limited warranty	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card 								50-GL, M.2 ogradable			only)		 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
													Mil-Spec test	MIL-STD-810G military testing
Note: The enecifica													Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions WxDxH: 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm
	Processor # of Rumber Cores Threads Frequency	Weight Starting at 2.49 lb / 1.13 kg Case color Black or Silver (silver case is NOT available in EMEA)
	i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Intel HD Graphics 620	Case material Display cover: CFRP/GFRP hybrid; Bottom: magnesium alloy / PPS hybrid
	or 8th Generation Intel Core i5 / i7 Processor	Smart card readerNone Media reader MicroSD card reader, supports UHS-II
	Processor # of Threads Frequency Frequency Cache Memory Types 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	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 Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;	(optional) USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Bundled Accy Optional: ThinkPad Ethernet Extension Adapter Gen 2
	Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets * System clocks down for processors with lower memory controller	IR camera and HD720p camera, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone,
Display	One of the following, configurable by model: • 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,	headphone / microphone combo jack, Dolby® Atmos™ via headphones
	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle • 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS,	Keyboard 6-row, spill-resistant, multimedia Fn keys, LED backlight UltraNav™ TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle • 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, glossy, LED backlight, IPS, 500 nits,16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut 170° viewing angle	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)	Fingerprint reader Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Storage	One of the following, configurable by model:	NFC (optional) Near Field Communication
	 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) 	Battery Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optical	None	Max battery life MobileMark® 2014: 19.3 hr
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2	* Battery life varies significantly with settings, usage, & other factors AC adapter 45W, 65W, or 65W Low Halogen USB-C AC adapter
WLAN +	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	Limited warranty One of the following, configurable by model: • 1-year depot repair service
, , ,	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	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
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card	Mil-Spec test MIL-STD-810G military testing
		Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
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Lenovo August 2019

















ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th Generation I	ntel® Core	e™ i5 / i7 Pr	ocessor					WWAN (optional)	One of the following, configurable by model:
	Processor # of Number Cores i5-8265U	# of Threads	Frequency	Frequency	ache M	lemory Types	Proces Graph		CIM cord (out)	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Compared to the content of th
	i5-8365U i7-8565U	8	1.6 GHz	4.1 GHz 6	MR	PDDR3-2133	Intel UI Graphics		SIM card (opt) Dimensions	Nano-SIM card slot, optional Verizon LTE (US) SIM card WxDxH (Privacy Guard): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95mm WxDxH (other model): 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm
	i7-8665U or 10th Generati	an Intal C	1.9 GHz		BMB	ailabla in FM	<u> </u>		Weight	Privacy Guard: starting at 2.4 lb / 1.09 kg; Other model: starting at 2.6 lb / 1.21 kg
	Processor # of	# of		May Turbo			Proces	ssor	Case color	Black paint or black weave
	Number Cores i5-10210U	Threads	Frequency 1.6 GHz	Frequency	6MB	Memory Types	Graph	nics	Case material	Display cover: Carbon Fiber; Bottom: magnesium alloy
	i7-10510U 4 i7-10710U 6	8 12	1.8 GHz 1.1 GHz	4.9 GHz 8		.PDDR3-2133	Intel U Graph		Smart card reade Media reader Ports	rNone None Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
Graphics	Intel UHD Graph supports externa supports three ir Max resolution:	al digital n ndepende 4096x230	nonitor via I nt displays;)4@60Hz (HDMİ or USE	В Туре	-C / Thunder	-	I)	- Monitor cable	(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 (Syste 8GB or 16GB / 2			soldered to s	system	board, no so	ockets		Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2
Display	Size Resolution	FUD (1999, 1999)							- Camera (optional,	None 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
	14.0" FHD (1920x Multi-touch	¹⁰⁸⁰⁾ IF	PS 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 /
	14.0" FHD (1920x Low Power	¹⁰⁸⁰⁾ IF	PS Anti-glare	400 nits	16:9	800:1	72%	170°	Kevboard	4 arráy far-field microphones, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, LED backlight
	FHD (1920x 14.0" ThinkPad Pr	1080) ivacy If	PS Anti-glare	400 nits	16:9	1000:1	72%	170°	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	Guard 14.0" WQHD (256	0x1440) IF	PS Anti-glare	300 nits	16:9	700:1	72%	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
	14.0" UHD (3840x HDR 400, Dolby Vision	í IF	PS Glossy	500 nits	16:9	1400:1	90%	170°		Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
Multi-touch (opt)	Capacitive-type anti-reflection (A				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 • M.2 2280 SSD	SATA 6	.0Gb/s						Max battery life AC adapter	MobileMark® 2014: 18.3 hr * Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
	 M.2 2280 SSD Intel Optane™ 	Memory I	H10 with So		orage,					Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Optical	M.2 2280, PCI • Intel Optane S None			NVMe 3.0 x	2				Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year planar repair service
Ethernet	Native Intel Ethe									3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WLAN +	One of the followin	g, configur	able by mode	el:	1	u. 5.0			Mil-Spec test	MIL-STD-810G military testing
Bluetooth™	 Intel Wireless-A Intel Wi-Fi 6 AX (AX201 for 10th) 	K201, Wi-	Fi 2x2 802.	11ax + Bluet	luetoo tooth 5	th 5.0 .0			Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Note: The specifica	ations above may r	not be ava	lable in all re	egions.						Lenovo









ThinkPad X1 Extreme Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor		Optional: Smart card reader
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery
	15-8300H		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 2.6 GHz 4.3 GHz 9MB 12 12 12 12 13 14 15 15 15 15 15 15 15		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
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;	Monitor cable (optional) Bundled Accy	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
	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
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
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° viewing angle Some: 15.6" (396mm) HDR UHD (3840x2160) with Dolby Vision™, anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1200:1 contrast ratio,	UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint®pointing device and buttonless glass surface multi-touch touchpad
Multi-touch (opt) Pen	100% gamut, 170° viewing angle, multi-touch, anti-reflection (AR)	Security chip vPro <i>(optional)</i>	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 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	
RAID (optional) Optical	RAID 0/1 support None	Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 9.5 hr; Hybrid mode: 14.9 hr * 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>))	AC adapter	135W slim tip AC adapter
WLAN	via bundled or optional ThinkPad Ethernet Extension Cable Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card		Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter		One of the following, configurable by model: • 1-year depot repair service
WWAN SIM card	None None		3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm	Mil-Spec test	MIL-STD-810G military testing
Weight	WxDxH (multi-ouch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.76 lb / 1.7 kg; Multi-touch model: starting at 4.06 lb / 1.8 kg	Environment	EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant
Case color Case material	Black Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy		
Note: The specification	ations above may not be available in all regions.		Lenovo



















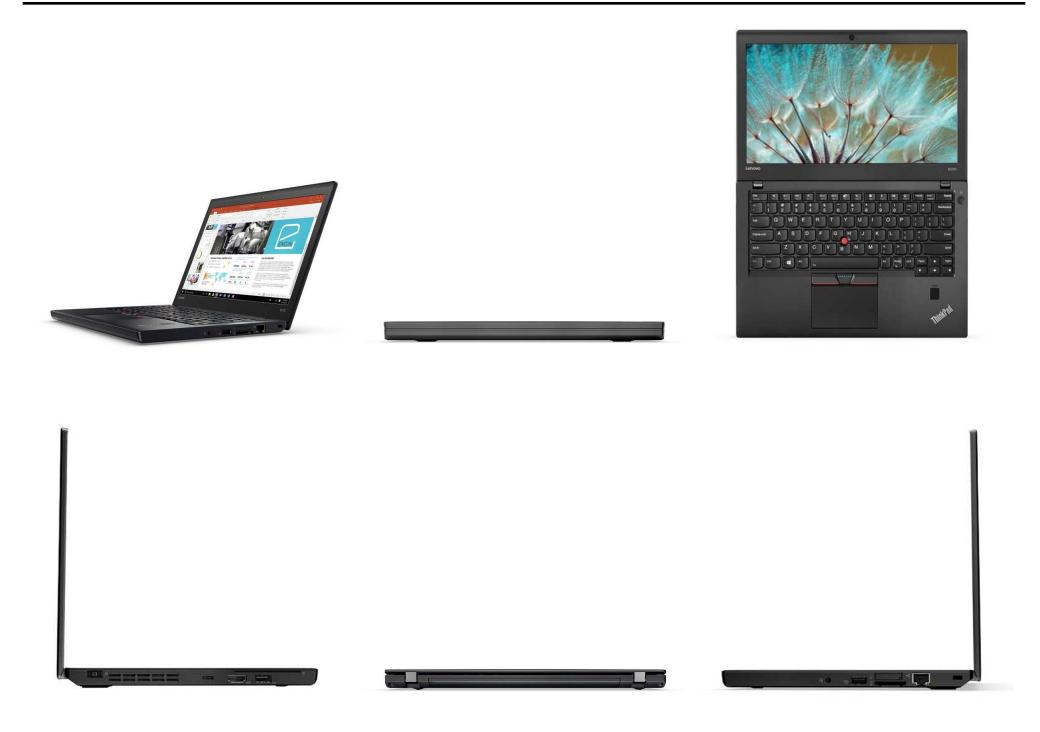


ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th Gener	ation I	ntel® Co	re™ i5 /	i7 / i9 Pr	ocessor					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	Ba Frequ		x Turbo quency Cac		emory ypes	Proce Grap		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 i5-9400H i7-9750H	4 4 6	8 8 12	2.4 (2.5 (2.6 (GHz 4.	1 GHz 8M 3 GHz 8M 5 GHz 12M	В	₹4-2666	Intel UHD 63		Case color Case material	Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy			
	i7-9850H i9-9880H	6 8	12 16	2.6 (6 GHz 12M 8 GHz 16M	_				Media reader	er Optional: Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card			
Graphics	supports of	GeForc externation	e® GTX al digital : depender	1650, 4 monito nt disp	1GB GDI r via HD∣ avs:	d DR5 memo MI or Thund i); 4K@60H	lérbolt"				Ports Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thundo (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo optional smart card reader, SD card reader, security keyhole, slim tip AC a *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretic				
Chipset Memory	Mobile Intel CM246 Chipset 64GB max / 2666MHz DDR4, dual-channel capable, two DDR4 SO-DIM							DR4 S	O-DIMM	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 Type Surface Brightness Ratio Ratio Gam									Viewing Angle	Barraroa / 100y	Optional: ThinkPad Ethernet Extension Cable			
	15.6" FHD	(1920x	1080)	IPS .	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 Dolby	(1920x Vision	1080) ™ HDR	IPS .	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 / Debt			
	Dolby	(3840x Vision	HDŔ	IPS .	Anti-glare		16:9	1200:1	100% Adobe	170°		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system			
	15.6" Dolby	(3840x Vision touch		OLED	AR, AS	SDR 400nit HDR 500nit (peak)	16:9	100000	:1 100% DCI-P3	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad			
Multi-touch (opt) Pen	anti-reflec	tion (A	R), anti-	smuda	ė (AS) co	oatinger ges ating accessory	,		3,.		Security Security chip System Mat (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology			
Storage RAID (optional)	Up to two M M.2 2280 RAID 0/1	SSD /	PCIe N\	/Me 3.	0 x 4						Fingerprint readé Color calibration NFC	er Touch style match on chip fingerprint reader on the keyboard bezel			
Optical Éthernet									rPro))		Battery Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) *MobileMark** 2014: 14 hr			
WLAN	via bundled or optional ThinkPad Ethernet Extension Cable Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0					е			AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter					
Bluetooth™	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter							nbo ada	pter		· · · · · ·	n Windows® 10 Home 64 or Windows 10 Pro 64			
WWAN SIM card	None None										Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service			
											Mil-Spec test	MIL-STD-810G military testing			
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			

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

Lenovo September 2019



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
		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	3.4 GHz 4MB	-		Ports	Two USB 3.1 Gen 1 (USB 3.0, one Always On),
	or 7th Generatio	n Intel Co						USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	Processor # of	# of	Base	Max Turbo	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
				de, 7mm high (e.		SD)		Windows 10 Home 64
				e 3.0 x 2, 16Gb/s Gb/s, in WWAN sl		torage.		Windows 10 Pro 64
	mutually			N and WiGig	0. 40	go,	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	 One of the following Realtek® RTL8 			el (WiGig is mutually 02 11ac ± RT4 1	y exclusive w	itn vvvvAN):	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	ıbanu 4G L n™ X7 I TF	ī E-A, ∃-A (Sierra Wireles	ss FM7455	١		
	 Integrated Mob 	oile Broad	lband 4G L	TE,		,		
CIM cord (and)				AÚ) (EMEA only)				
SIM card (opt)	iviicro-SIM card	siot, opt \	erizon Li E	(US) or Lenovo®	Connect (E	w∟A) SIM card		:
								Lenovo



ThinkPad X280 Platform Specifications

Processor				e™ i3 / i5 P n US and EN		U is NC	T available in	US	Dimensions Weight	WxDxH: 12.11" x 8.26" x 0.69-0.70"; 307.7mm x 209.8mm x 17.4-17.8mm FHD non-touch model: 2.49 lb / 1.13 kg;
	Processor Number	# of Cores	# 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
	i3-7020U i3-7130U i5-7200U i5-7300U	2	4	2.3 GHz 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 er Optional: Smart card reader
		neratio	n Intel Co	ore i3 / i5 / i			I	l .	Media reader	MicroSD card reader, in the combo slot with nano-SIM card
	Processor Number	# of Cores	+	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), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),
	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	- Monitor cable	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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Graphics	supports t	externa hree ir	al digital r	nt displays	HDMI or U: :	SB Typ	e-C;	30Hz (HDMI)	(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2 I) One of the following, configurable by model:
Chipset Memory	Intel SoC 4GB, 8GB * 4GB mem	(Syste , or 16 ory is N	m on Chi GB / 240 <i>NOT availa</i>	p) platform	R4 / soldere	ed to sy	rstemboard,	no sockets	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
Display	22 Some: 12	20 nits, 2.5" (31	16:9 aśp 17.5mm)	ect ratio, 4 FHD (1920	00:1 contra x1080), an	st ratic ti-glare	, LED backl	ight, IPS,	Keyboard UltraNav™	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch (opt)	On-cell to:	uch. si	upports 1	ect ratio, 7 0-finger ge OT available	sture (FHD	only)	, 170° viewi	ing angle	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Storage	• M.2 SSE) / SAT	A 6.0Gb/		GB SSD M.		war sen i	M.2 PCIe NVMe)	• .	er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Optical	None) / FOI	e invivie,	r Cie 3.0 X	4, 3200/5	(e.g. X	KKGD 33D I	vi.2 FOIE INVIVIE)	NFC (optional) Battery	Near Field Communication Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet							· I219-LM (<i>v</i> Adapter Ger		Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 16.6 hr
WLAN + Bluetooth™				AC 8265, V <i>BT4.2 but is</i>				h 4.1, M.2 card	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB-C AC adapter
WWAN (optional)				rable by mod						n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	 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 Nano-SIM card slot, in the combo slot with microSD card reader, 								Limited warranty	 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
	optional Verizon LTE (US) SIM card						Mil-Spec test	MIL-STD-810G military testing		
Note: The specifica									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Lenovo



ThinkPad X390 Platform Specifications

Processor	8th Generation Intel® Core™ i3 / i5 / i7 Processor						Dimensions	Models FHD Non-touch			HD /	FHD Multi-touch				
	Proce Numb					Max Turbo Frequency	Cache	Memory Types		essor phics		Carbon Fiber	311.9mm x 217.0mm x 16.5mm 12.28" x 8.54" x 0.65"		-	
	i3-814				4MB 6MB				PPS	312.0mm x 217.2mm 12.28" x 8.55" x 0			x 217.2mm x 16.9mm 8" x 8.55" x 0.67"			
	i5-836		— / / B	1.	.6 GHz	4.1 GHz 6MB	DDR4-2400	Intel UHD Graphics 620	Weight	Models	FHD Non-touch	Н	ID	FHD Multi-touch		
		7-8565U		_	.8 GHz		8MB					Carbon Fiber	2.70 lb / 1.22 kg		-	-
	i7-866		Cara Irakal		.9 GHz		8MB	and a factor for F	 			PPS	2.85 lb / 1.29 kg	2.93 lb /	/ 1.33 kg	2.84 lb / 1.28 kg
		or 10th Generation Intel Core i5 / i7 Processor (NOT available in EMEA) Processor # of # of Base Max Turbo Memory Processor						Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch only) or PPS;				S:			
	Numb					Max Turbo Frequency	Cache	Memory Types		phics		Bottom: Magnesium/Aluminum		,,, c c	-,	
	i5-102	4	8	_	.6 GHz .8 GHz	4.2 GHz	6MB 8MB	DDR4-2400	Intel UHE	Graphics	Media reader	er Optional: Smart card reader MicroSD card reader, in the combo slot with nano-SIM card				
Graphics	Intel l	HD Grap	hics 620	or Ir	ntel UHD	Graphics in	n proc	essor:			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 one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD a			ivery and DisplayPort)	
G. G	suppo	rts extern	al digital	mor	nitor via H	HDMI or US						one USB 3.1 T	ype-C Gen 2 / Thunde	erbolt 3 (with	h the function	on of PD and DP),
	supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)						HDMI 1.4b, Etl	HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,								
Chipset						manacibol	.,, 400	OXL TOO @ L	-7112 (112) () () () () () () () () () (_	headphone / microphone combo jack, optional smart card i			reader,	
Memory	mory 4GB, 8			rel SoC (System on Chip) platform GB, 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no socket:									onnector, security keyl	hole transfer sne	ed may he lo	wer than theoretical speed
	* Insta	led memor	y is actua	lly 26	66MHz bu	ıt run at 2400	MHz a	ue to Intel lin	nitation		Monitor cable	* Depending on many factors, actuál daťa transfer speed may be lower the HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			wer man meorencar speed	
Display	Size	Resolution	-	Туре	Surface	Brightness	Aspec Ratio	t Contrast Ratio	Color		(optional)		Lenovo USB-C to V Lenovo USB-C to D			
	13.3"	HD (1366x	768)	TN	Anti-glare	250 nits	16:9	500:1	45%	90°	Bundled Accy		kPad Ethernet Extens			
			/					800:1			Camera (optional) One of the follow	ing, configurable by mod	lel:		
	13.3"	FHD (1920:	x1080)	IPS	Anti-glare	300 nits	16:9	(non-touch	72% (۱	170°		 HD720p camera with ThinkShutter camera privacy, fixed for the same and HD720p camera with ThinkShutter camera HD Audio, Realtek® ALC3287 codec / 		acy, fixed focus		
								(multi-touc	h)		Audio support			a privacy, fixed focus		
		FHD (1920: ThinkPad F		IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°		stereo speakei	rs, 1W x 2, Dolby® Auc	dio™ Premiι		
		Guard								1	Kanda a sud		ield microphone, head	<u> </u>		
	On-cell touch, supports 10-finger gesture (FHD only)								Keyboard -UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
Storage	 M.2 2280 SSD / SATA 6.0Gb/s M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 						Security Power-on password, hard disk password, supervisor password, security ke			•						
	• M.2	2242 SSI	D / PCle	NVN	/le, PCle	3.0 x 2					Security chip	y chip Discrete TPM 2.0, TCG Certified i Mgt (opt) Intel vPro Technology				
	• Inte	Optane™ 2280, PC	Memory	/ H1	0 with So	olid State S	torage	,			Fingerprint reade	pt) Intel vPro Technology der Optional: Touch style match on chip fingerprint reader on the palm rest			he palm rest	
Optical	None	2200, FC	ie invivie	3.0	X 4						NFC (optional)	Near Field Communication				
Ethernet	Native	Intel Eth	ernet Co	nnec	ction I219	9-V (Non-vF	<i>ro</i>) or	1219-LM (v	Pro)		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr)				
						ernet Exten	sion A	dapter Ger	12		Max battery life	with 65W USB Type-C AC adapter Max battery life MobileMark® 2014: 17.6 hr				
WLAN (optional)		the followi				e <i>l:</i> 02.11ac + E	2luoto	oth 5 0			,	* Battery life var	ies significantly with settii		& other factor	s
											AC adapter					
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 						Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model:									
WWAN (optional)		the followi			e by mode	e <i>l:</i>					Limited warranty	 1-year depot 		CI.		
	Inte	less WAN rated Mo	i upgrada bile Broa	abie idbai	nd 4G LT	E. Fibocom	1 L830	-EB. M.2 ca	ard (EME	A only)		 1-year depot 	 1-year depot with 2-year planar repair service 			
	 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 							,,		 3-year/1-yr b 3-year/1-yr b 	attery depot repair ser	rvice ervice				
	* For non-WWAN model, it means the model is NOT WWAN upgradable						Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing								
							Environment	EPEAT™ Silver: ENERGY STAR® 7.1: RoHS-compliant								
Note: The specifica				ما ما : م	سالمصليا						=	L. L/11 Olive	i, Enerior 6777 7.1	.,	piidiit	Lenov



ThinkPad X395 Platform Specifications

Number Cores Threads Frequency Frequency Frequency Controller Graphics Ryzen 3				
Ryzen 3 4 4 2.1 GHz 3.5 GHz 4MB L3 Reden Vega 6 Graphics Ryzen 5 Pro 3500U Ryzen 7 Pro 3700U Ryzen 7 Ryzen 7 Pro 3700U Ryzen 7 Ryzen 7 Pro 3700U Ryzen 7 Ryzen 7 Pro 3700U Ryzen 7 Ryzen 7 Ryzen 7 Pro 3700U Ryzen 7 Ryzen	-SIM card			
Pro 3300U 4 4 8 2.1 GHz 3.7 GHz 4MB L3 Pro 3500U 4 8 2.1 GHz 3.7 GHz 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 4 8 0 2.3 GHz 4.0 GHz 4MB L3 Pro 3700U 5 0 Case material Display cover: PPS/GF; Badeon Vega 8 Graphics Radeon Vega 10 Graphics Radeon Vega 10 Graphics Radeon Vega 10 Graphics Ports 4 0 GHz 4MB L3 Pro 3700U 6 0 Graphics Pro 3700U 7 0 Graphic				
Ryzen 5 Pro 3500U 4 8 2.1 GHz 3.7 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Pro 3700U 4 8 8 2.3 GHz 4.0 GHz 4.				
Ryzen 7 4 8 2.3 GHz 4.0 GHz 2MB L2 / 4MB L3 Radeon Vega 10 Graphics Ports One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen				
	en 2.			
supports external digital monitor via USB-C or HDMI; supports three independent displays: Supports three independent displays: Combo slot of nano-SIM card (WWAN models) and	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 m Monitor cable (optional) USB-C to VGA: Lenovo USB-C to VGA Adapter	dapter			
Display Size Resolution Type Surface Brightness Ratio Rati	aen 2			
13.3" HD (1366x768) TN Anti-glare 250 nits 16:9 300:1 45% 90° + HD720p camera with ThinkShutter camera privac				
• IR camera and HD720p camera with ThinkShutter 13.3" FHD (1920x1080) IPS Anti-glare 300 nits Indicated a property of the pr	1/			
FHD (1920x1080) IS FHD (1920x1080) IFS Anti-glare 400 nits 16:9 1000:1 72% 178° Keyboard Guard 6-row, spill-resistant, multimedia Fn keys, optional L TrackPoint® pointing device and buttonless Mylar su	LED backlight surface multi-touch touchpad			
Multi-touch (opt) On-cell touch supports 10-finger gesture (FHD only) Security Power-on password, hard disk password, supervise	Power-on password, hard disk password, supervisor 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	l			
M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Optical M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Fingerprint reader <i>Optional:</i> Touch style match on chip fingerprint reader <i>NFC</i> 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 Chawith 65W USB Type-C AC adapter	narge (charge up to 80% in 1hr)			
WLAN (optional) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter Max battery life MobileMark® 2014: 14.5 hr *Battery life varies significantly with settings, usage, & oth *Buttery life varies significantly with settings, usage, & oth	other 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 Nano-SIM card (opt) *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card * 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-compl	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			

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

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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.

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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
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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

ThinkPad X1 Yoga (4th Gen) - Spec updated

Withdrawals in this update

► Withdrawn product(s)

None











ThinkPad X1 Tablet (3rd Gen) Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Control buttons	Power button, volume control button, reset switch		
	Processor # of # of Base Max Turbo Cache Memory Types Processor Graphics Cache Memory Types Processor Graphics Cache Memory Types Processor Memory Types Processor Memory Types Processor Memory Types Processor Types Processor Memory Types Processor Processor Memory Types Processor Dock Monitor cable (opt				
	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 LPDDR3-2133 Graphics 620	Adapter (optional,	USB-C to RJ45: Lenovo USB-C to Ethernet Adapter USB-C to VGA: Lenovo USB C to VGA Plus Power Adapter USB-C to HDMI: Lenovo USB-C to HDMI Plus Power Adapter		
	1.8 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 / two microphones, combo audio/microphone jack		
Chipset Memory	Intel SoC (System on Chip) platform 8GB, or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Pogo keyboard	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-lon 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 G-sensor	Ambient Light Sensor 3D accelerometer		
Ethernet WLAN	None Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card	Gyroscope	3D gyrometer		
	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	GPS '	GPS function is integrated into WWAN module		
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Preload	Some: Windows 10 Pro 64 Some: Windows 10 Home 64		
(/ /	Integrated Mobile Broadband 4G LTE-A, Qualcomm [®] Snapdragon [™] X7 LTE-A (Sierra Wireless EM7455)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year planar		
SIM card (opt)	Nano-SIM card slot, in the combo slot with microSD card reader	_			
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 depot repair service 3-year/1-yr battery limited onsite service 		
Weight	Tablet only: starting at 1.96 lb (0.89kg) Tablet+keyboard: starting at 2.8 lb (1.27kg)	Mil-Spec test	MIL-STD-810G military testing		
Case color Case material	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 Case color	Starting at 3.44 lb / 1.56 kg Black or Silver			
	Number Cores I frequency Frequency Types Graphics	Case material	Display cover: Aluminum			
	i3-7020U 2 4 2.3 GHz // 3MB DDR4-2133 Intel HD Graphics 620		Bottom: GFRP			
	8th Generation Intel Core i3 / i5 / i7 Processor		mart card readerNone			
	Draggery # of # of Dage May Turks Mayory Draggery	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),			
	Number Cores Threads Frequency Frequency Cache Types Graphics	0113	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	i3-8130U 2 4 2.2 GHz 3.4 GHz 4MB		HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole			
	1.6 GHz 3.4 GHz 6MB DDR4-2400 Intel UHD Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	13-83300 4 8 1.7 GHZ 3.0 GHZ 0WB	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
	1.8 GHz	(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)	Audio support	World facing: Rear camera, 5MP resolution, auto focus HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2W			
Chipset	Intel SoC (System on Chip) platform Up to 32GB max / 2400MHz DDR4, dual-channel capable,		dual array microphone, headphone / microphone combo jack			
Memory	two DDR4 SO-DIMM sockets		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-touch			
Display	13.3" (338mm) FHD (1920x1080), glossy, LED backlight, IPS, 300 nits,	Security	Power-on password, hard disk password, supervisor password, security 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	Security chip System Mat (opt)	Discrete TPM 2.0, TCG Certified Intel vPro Technology			
Hinge ` ' / '	Yoga hinge, 360 degree	Fingerprint reader	r Optional: Touch style fingerprint reader on the keyboard bezel,			
Convert-mode Pen	Laptop, tent, stand, yoga and tablet	NFC (optional)	anti-spoofing technology Near Field Communication (mutually exclusive with smart card reader)			
	ThinkPad Pen Pro, active pen for multi-touch display, on-board garage One of the following, configurable by model:	Battery	Integrated Li-lon 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)			
Storage	M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2)	Dattery	with 65W USB Type-C AC adapter			
	• M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe)	Max battery life	MobileMark® 2014: 12.85 hrs			
Optane Memory Optical	None None	AC adapter	* Battery life varies significantly with settings, usage, & other factors 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			
Linornot	via optional ThinkPad Ethernet Extension Cable Gen 2	Limited warranty	One of the following, configurable by model:			
WLAN +	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card	,	1-year depot repair service			
Bluetooth™	* Wireless card supports BT4.2 but is limited to BT4.1 by Windows OS		 1-year depot with 2-year planar 3-year/1-yr battery depot repair service 			
WWAN SIM card	None None		3-year/1-yr battery limited onsite service			
J 00.10		Mil-Spec test	MIL-STD-810G military testing			
		Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant			
	<u> </u>		Lenovo			

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ThinkPad L390 Yoga Platform Specifications

Processor	8th Gener	ation I	ntel® Cor	e™ i3 / i5 /	i7 Process	or			Smart card reade	
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i3-8145U i5-8265U i5-8365U	2 4 4	8 8	2.1 GHz 1.6 GHz 1.6 GHz	3.9 GHz 3.9 GHz 4.1 GHz	4MB 6MB 6MB	DDR4-2400	Intel UHD Graphics 620		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
	i7-8565U	4	8	1.8 GHz	4.6 GHz	8MB			Monitor cable (optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to VGA + Power Adapter: Lenovo USB-C to VGA plus Power Adapter
Graphics	supports t	externa three ir	al digital independe	n processo monitor via ent displays 04@60Hz	HDMI or U ;	,,	,	30Hz (HDMI)	Bundled	USB-C to HDMI: USB-C to HDMI + Power Adapter: Lenovo USB-C to HDMI plus Power Adapter USB-C to DP: 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	300 nits, 1	16:9 as e-type	pect ration	20x1080), g b, 800:1 co ch, AR (ant	ntrast ratio	, 72% g	jamut, 170°	viewing angle er gesture	Camera	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)
Multi-mode Pen <i>(optional)</i>	Notebook,	, stand	l, tent, tal	olet pen for mu	ulti-touch d	isplay, d	on-board ga	arage	Audio support	HD Audio, Realtek ALĆ3287 codec, Dolby® Audio™ Premium / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack
Storage	 M.2 SSI 	D / SAT	ΓΑ 6.0Ğb						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
	 M.2 (228 Intel Op M.2 228 	80) SS tane M 80, PCI	D / PCIe lemory H e NVMe		le 3.0 x 4	torage,			Security Security chip System Mat (opt)	Power-on password, supervisor password, system management password, hard disk password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Optane™ Memory Optical	None								Fingerprint readé	r Optional: Touch style fingerprint reader on the palm rest (mutually exclusive with World facing camera)
Storage				rable by mod		1.0\			NFC (optional)	Near Field Communication
	• M.2 SSI	D / SAI	le NVMe	/s (e.g. xxx , PCle 3.0 :	x 4, 32Gb/s	ı.∠) s (e.g. x	xxGB SSD	M.2 PCIe NVMe)	Battery	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optical	None								Max battery life	MobileMark® 2014: 12.17 hrs
Ethernet	via optiona	al Thin	kPad Eth	nection I21 ernet Exte et Adapter	9-V (<i>Non-</i> nsion Cabl	<i>vPro</i>) o e or	r I219-LM (vPro)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WLAN				Vi-Fi 2x2 80	20 11 22	Olivetee	+h = 0 M 0	2049	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™				tegrated in					Limited warranty	One of the following, configurable by model: 1-year depot repair service
WWAN	None								1	1-year depot with 2-year planar
Dimensions Weight	WxDxH: Starting at			' x 0.74"; 32	21.8mm x 2	224.2m	m x 18.8mi	n		3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Case color	Black or Silver Display cover: Magnesium / Aluminum								Mil-Spec test	MIL-STD-810G military testing
Case material	Display co Bottom:	over: N	Magnesiu GFRP	im / Alumin	um				Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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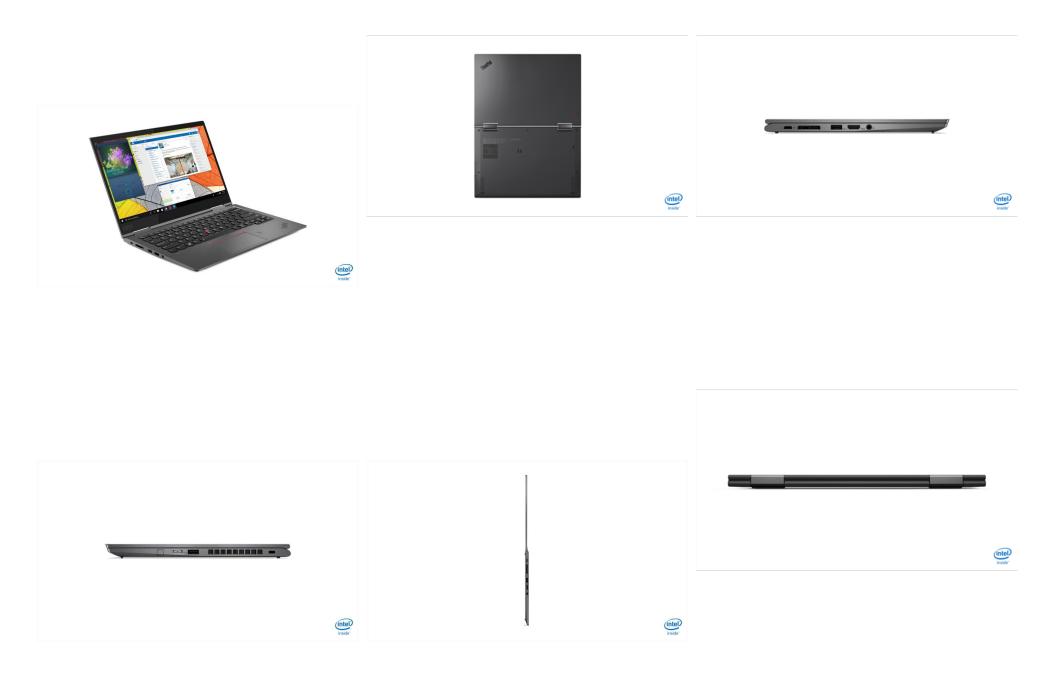






ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Smart card reader	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 * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	8th Generation Intel Core i5 / i7 Processor	WiGig dock	None HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	Processor # of # of Base Max Turbo Number Cores Threads Frequency Frequency Frequency 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 1.2 GHz		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	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified
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	Intel vPro Technology 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	Battery Max battery life	Integrated Li-Ion 54Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 15.4 hrs * 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%	<u> </u>	45W or 65W USB Type-C AC adapter Ambient Light Sensor
Hinge Convert-mode Pen <i>(optional)</i>	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 (vPro)		One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year planar
WLAN	via optional ThinkPad Ethernet Extension Cable Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card		3-year/1-yr battery depot repair service MU CTD 8100 military testing
	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS		MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR®; RoHS-compliant
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter Integrated Mobile Broadband 4G LTE-A,		
WWAN (optional) SIM card (opt)	Integrated Mobile Broadband 4G Li E-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card		
Dimensions Weight Case color	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb (1.4kg) Black or silver		
Case material	Display cover: Carbon-Fiber and Glass-Fiber hybrid; Bottom: magnesium-PPS hybrid		
			Lenovo



ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor					/ i7 Proce 5 / i7 Proc	ssor or essor (Not	availab	e in EMI	EA)		Dimensions Weight	WxDxH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24lb / 1.47kg	
	Proces		of # of	_		Turba	ne Memo	1	Proce	essor	vveignt	Other model: starting at 3.24b / 1.47kg	
	Numl		res Threa			quency		ry rypes	Grap	hics	Case color	Iron Grey	
	i5-826			1.6 (GHz 6ME	_				Case material	Display cover: Aluminium; Bottom: Magnesium	
	i5-836			1.6 (GHz 6ME	_		Intel Graphi		Smart card reade		
	i7-866		4 8	1.9 (GHz 8ME		R3-2133	Спарт	03 020	Media reader	None	
	i5-102	_		1.6 (GHz 6ME					Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3	
	i7-105	10U		1.8 (GHz 4.9	GHz 8ME	3		Intel	OHD hics		(with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models),	
	i7-107	10U	6 12	1.1 (GHz 4.7	GHz 12M	В		Giap	711103		headphone / microphone combo jack, side docking connector, security keyhole	
Graphics	suppo suppo	rts exterts thre	ernal digit e indeper	al monito ndent dis	or via HDN splays;	ohics in prod MI or USB	Type-C™		,		Monitor cabl Bundled Accy	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Etherntet Extension Adapter Gen 2	
						3 Type-C);	4096x2	160@24	Hz (HL	OMI)	Camera (optional	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus	
Chipset Memory		Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets									Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC1012L codec, 	
Display	Size	Re	solution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		Stereo speakers, 2W x 2, 0.8W x 2, Dolby® Audio™ Atmos / 4 array 360-degree far-field microphones, headphone / microphone combo jack	
	14.0"	FHD (1 Low Po	920x1080) wer	IPS	Glossy	380 nits	16:9	800:1	72%	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad	
		FHD (1	920x1080)								Security	Power-on password, supervisor password, system management password, hard disk password	
	14.0"	Guard	ad Privacy	IPS	Glossy	380 nits	16:9	1000:1	72%	170°	Security chip System Mgt	Discrete TPM 2.0 TCG Certified Optional: Intel vPro Technology	
	14.0"	WQHD (2560x		IPS	Glossy	280 nits	16:9	800:1	72%	170°		er Touch style match on chip fingerprint reader on the palm rest Optional: Near Field Communication	
	14.0"		8840x2160] ⁄ision™ 0	IPS	Glossy	470 nits	16:9	1400:1	90%	170°	Battery Max battery life	Integrated Li-Ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 18.1 hrs	
					R (anti-ref	ection), AS	S (anti-s	mudge),			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	
Multi-touch Hinge			finger ges 360 degre								G-sensor	3D accelerometer	
Convert-mode Pen	Laptor	o, tent,	stand, an	d tablet	or multi-to	ouch displa	y, on-bo	ard rech	argeab	le	Gyroscope GPS	3D gyrometer GPS function is integrated into WWAN module	
Storage	• M.2	2280 9	owing, conf SSD / SAT SSD / PCI	Ă 6.0Gb) x 4	-				Preload	One of the following, configurable by model: • Windows® 10 Pro 64 • Windows 10 Home 64	
0 11 1	Intel M.2	Optan		ry H10	with Solid	State Stor	age,				Limited warranty	1-year depot repair service	
Optical	None										_	1-year depot with 2-year planar 2-year/1-ye bettern depot repair consider	
Ethernet				t Connection I1219-LM (<i>vPro</i>) or I1219-V (<i>Non-vPro</i>) nal ThinkPad Ethernet Extension Adapter Gen 2							Mil-Spec test	3-year/1-yr battery depot repair service MIL-STD-810G military testing	
WLAN Bluetooth™	Intel W Blueto	Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card tooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant	
WWAN (optional)	One of	the follo	wing, conf	igurable b	y model:	A, Fibocom	1 850-G	M 2 c	ard				
SIM card (opt)	 Integ 	grated	Mobile Br	oadband	I 4G LTE-	A, Fibocom A, Fibocom E (US) SIM	1 L860-G			√I.2 card			
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ThinkPad X380 Yoga Platform Specifications

Processor					7 Processor			Dimensions	<i>WxDxH:</i> 12.34" x 8.75" x 0.72"; 313.5mm x 222.2mm x 18.2mm			
	Processor Number	# of	# of Threads		Max Turbo Frequency Cach	e Memory Types	Processor Graphics	Weight Case color	Starting at 3.17 lb (1.43kg) Black or silver			
	i3-8130U	2	4	2.2 GHz	3.4 GHz 4ME	3	Спартноз	Case Material	Carbon-Fiber Hybrid			
	i5-8250U			1.6 GHz	3.4 GHz 6ME		Intel UHD		er Optional: Smart card reader (mutually exclusive with NFC)			
	i5-8350U	4	8	1.7 GHz	3.6 GHz 6ME		Graphics 620	Media reader Ports	One microSD card slot (microSD, microSDHC, microSDXC), UHS-I Two USB 3.1 Gen 1 (one Always On), Ethernet extension connector,			
	i7-8550U i7-8650U	-		1.8 GHz 1.9 GHz	4.0 GHz 8ME 4.2 GHz 8ME			1 0113	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	Intel UHD	Graph	iics 620 i	n processoi	r only; HDMI or USB ⁻	Type-C:		WiGig dock	* Depending on many factors, actual data transfer speed may be lower than theoretical speed None			
	supports t	hree ir	ndepende	ent displays	;			Monitor cable	USB-C to VGA: Lenovo USB-C to VGA Plus Power Adapter			
-					• • • •	4096x2160@30	OHz (HDMI)	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
Chipset	Intel SoC	(Syste	m on Ch	ip) platform	Idarad ta ayata	mboard, no soc	leata	Camera	One of the following, configurable by model:			
Memory						mory controller	keis	Camera	720p: HD720p camera, fixed focus			
Display					LED backlight,			Audio support	IR & 720p: IR camera and HD720p camera, fixed focus HD Audio, Conexant® CX11771 codec / stereo speakers, 2W x 2 /			
	300 nits, 1	6:9 as	pect ratio	o, 800:1 cor	ntrast ratio, 170	° viewing angle		Audio Support	dual array microphone, headphone / microphone combo jack			
Multi-touch	Supports 1				i-reflection), AS	(anti-smudge),		Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight			
Hinge	Yoga hinge	e, 360	degree					UltraNav™	TrackPoint® pointing device and 3+2 buttons Mylar surface multi-touch click pad			
Convert-mode Pen	Laptop, ter	nt, stai	nd, yoga ro, active	and tablet	lti-touch displa	y, on-board rech	nargeable		Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified			
Storage					g. xxxG SSD)	y, on board reer	largeable		Intel vPro Technology			
· ·	Some: M.	2 SSD	/ PCle N	VVMe, PCI	3.0 x 4, 32Gb	s (e.g. xxxG SS	SD PCIe NVMe)	Fingerprint readé	r Optional: Touch style match on chip fingerprint reader on the palm rest			
Optical Optane Memory	None None							I	Near Field Communication (mutually exclusive with smart card reader)			
Ethernet		al Etho	rnet Con	naction I21	Q-V (Non-vPro	or I219-LM (<i>vF</i>	Pro)	Battery Max battery life	Li-lon 51Wh battery MobileMark® 2014: 13.6 hrs			
Linemet				nernet Exter		7 OT 12 13-LIVI (VI	10)		* Battery life varies significantly with settings, usage, & other factors			
WLAN						1ac + Bluetooth		AC adapter	45W or 65W AC adapter (slim tip), 45W or 65W USB Type-C AC adapter			
						<i>BT4.1 by Windo</i> oth combo adap		Light sensor G-sensor/	Ambient Light Sensor 3D accelerometer and 3D magnetometer			
Bluetooth™						от сотпро адар	ter	eCompass	3D compass			
WWAN (optional)					=, 8), M.2 card (EN	AEA only)		Gyroscope	3D gyrometer			
SIM card (opt)	Nano-SIM			JIII LOOU LL), W.Z Cara (Er	nea only)		Preload	Some: Windows® 10 Home 64 Some: Windows 10 Pro 64			
								Limited warranty	One of the following, configurable by model:			
								Limited warranty	1-vear depot repair service			
									1-year depot with 2-year planar			
								Mil Connectors	3-year/1-yr battery depot repair service MU STD 0100 crilitary teating.			
								Mil-Spec test	MIL-STD-810G military testing			
								Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant			

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ThinkPad X390 Yoga Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Smart card reade	rOptional: Smart card reader
	Processor H of H of Base Max Turbo 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),
	Number Cores Threads Frequency Frequency Cache Memory Types Graphics i5-8265U 4 8 1.6 GHz 3.9 GHz 6MB	FOILS	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Display Port).
	15-836511 4 8 1.6 GHz 4.1 GHz 6MB		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Display Port), 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
Chipset	Intel SoC (System on Chip) platform	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter 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, supervisor password, system management password,
Pen	ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable • M.2 2280 SSD / SATA 6.0Gb/s	Security	hard disk password, security keyhole
Storage	M.2 2280 SSD / SAIA 6.0Gb/s M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4	Security chip	Discrete TPM 2.0 TCG Certified
	 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 	System Mgt (opt)	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest
	 Intel Optane Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 	NFC (optional)	Near Field Communication
Optane™ memory	Optional: Intel Optane Memory H10	Battery	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Optical	None	Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 14.5 hrs
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		* Battery life varies significantly with settings, usage, & other factors
WLAN	One of the following, configurable by model:	AC adapter	45W or 65W USB Type-C AC adapter
VVLAIN	 Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 	Light sensor G-sensor	None 3D accelerometer
DI 1 11 711	 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter 	Gyroscope	3D gyrometer
Bluetooth™ WWAN (optional)	One of the following, configurable by model:	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
vvvvAiv (optional)	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, 	Limited warranty	One of the following, configurable by model:
	M.2 card (EMEA only)		1-year depot repair service1-year depot with 2-year planar
	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable		3-year/1-yr battery depot repair service
Dimensions	WxDxH: 12.22" x 8.62" x 0.63": 310.4mm x 219mm x 15.95mm		3-year/1-yr battery limited onsite service
Weight	Starting at 2.85 lb (1.29kg)	Mil-Spec test	MIL-STD-810G military testing
	Black or silver (Silver is not available in EMEA) Display cover. Carbon-Fiber Hybrid	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Case Material	Bottom: Carbon-Fiber Hybrid		
	·		Lanava











ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Genera Intel Penti				Processo	r, Intel	Celeron® prod	cessor, or	Dimensions Weight	WxDxH: 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 Processor Controller Graphics		Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30	2		1.0 GHz	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	١.	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 (4GB or 8G					lz DDF	R4 /		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), an io, 800:1 c	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, batteı	ries requir	ed, on-	board garage		Battery Max battery life	Integrated Li-Ion 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		eless-A	AC 9260	, Wi-Fi 2x2	802.11ac		etooth 5.0, M.			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.

July 2019 - Version 545

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®, In	tel Pentiur	n®, or 6th / 7th G	en Intel	Core™ i3 / i5 / i7	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				
			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 Isothografiand may be a second and may				
	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	3.2G / 3.6G	6 MB	DDR4-2133 DDR4-2133	HD 530 HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black				
	Core i7-6700	4/4	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	-	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	Core i3-7100	2/4	3.4G / 4.0G	3 MB	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	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	e 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 ier (DVD±l	e (SSD) / PCIe N ory (models with 5Gb/s Drive, slim RW), SATA 1.5Gl	IVMe, Po 7th gen (9.5mm)	Core processor),	√s M.2		With UltraFlex II stand: 21.1X 10.0 X 19.3 (inch); (Touch) 20.3 / 9.2 (Non-touch) 18.3 / 8.3 Tilt: 61° back, -5° forward; 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					
Display	Max resolution: 40 21.5" (546.1mm) I angle (+/- 89°), LE anti-glare, support	Full HD 1(ED 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 isted) preinstalled through downgrade • Microsoft Office preloaded;				
Multi-touch Camera	Optional Projected Optional 1080p ca switch on/offf	d Capacitiv imera, 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 Some: Windows 10 Home 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 Some: Windows 10 Home 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 Home 64-bit Some Field added, purchase a product key to activate Some Some Some Some Some Some Some Som				
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 CenterLenovo 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 microphon v factors, ac	Always On and fa e combo jack (3. ctual data transfer s	st chargi 5mm) speed may	e), optional card in the open than the open	reader,		ThinkVantage System Update Create Recovery Media Adobe® Reader® Cyberlink PowerDVD Create				
M.2 card slot	Two M.2 Card slot	`			<u> </u>		<u> </u>	(ĎVD±RW)				
Audio support	High Definition (HI Dolby [®] Audio™ ce	,	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 Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Qualcomm 1 combo adapter	Atheros , 2x2		l band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com				
		uetooth 4.	1 combo adapter	; 1x1								
	Some: 11ac wirel	ess, M.2 (uetooth 4	Jard, Intel Dual E 1 combo adapter	ana Wir 2v2	eless-AU 8265,							
Bluetooth™ Ethernet	Some: Bluetooth 4 Gigabit ethernet, F	1.1 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							
See footnotes for	more detailed informa	ation						© Lenovo				



























ThinkCentre M820z Platform Specifications

Processor	Intel® Celeron®, Intel	Pontium®	or 9th / 9th Con	Intol Co	roTM i2 / i5 / i7 / i0) oorioo	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),			
Processor		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			
	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 UHD 630	Mechanical	 Business black color Toolless back cover, stand, memory removal 			
	Core i5-9500	6/6	3.0G / 4.4G 3.1G / 4.6G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630		• Support VESA mount (100mm)			
	Core i5-9600 Core i7-9700	6/6 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):			
								10.3 V 1.0 V 13.5 (inch) (Touch) 11.6 / 5.25			
Memory	32GB max (16GB SC				old models), DDH	4-2666^,		491 X 49 X 342 (mm) (Non-touch) 11.1 / 5.05 N/A			
	two 260-pin SO-DIMN * System clocks down				moru controllor			With Full Function Monitor stand (No camera):			
								19.3 X 9.9 X 14.8 to 19.1 (inch) (Non-touch) 15.8 / 7.18 Tilt: 45° back, -5° forward; Lift: 110mm;			
Storage	Some: Hard Drive / S Some: Solid State D				200 rpm			491 X 252 X 377 to 486 (mm) (Norribuch) 13.877.18 Elit. 110/film, Swivel: +/-45°			
	Some: M.2 SSD / PC							With UltraFlex III stand (No camera):			
	* 128GB SSD M.2 (2)	242) PCIe	NVMe only sup	ports PC	Cle 3.0 x 2, 16Gb	/s		19.3 X 9.9 X 16.4 (highest) (inch) (Touch) 17.3 / 7.85 Tilt: 70° back, -5° forward;			
Ontinal	Some: Intel Optane				entium Processo	r), M.2		491 X 252 X 416 (highest) (mm) (Non-touch) 16.9 / 7.65 Lift: 136mm; Swivel: +/-45°			
Optical	Some: DVD-ROM S. Some: DVD Burner	AIA 1.5GI	0/S Drive, SIIM (9 /) SATA 1 5Gb/s	.umm) Drive s	lim (9 0mm)			Swivei: +/-45			
Media reader	Optional 3-in-1 media			Diive, 3			Power supply	150 watts, autosensing, 90% PSU			
Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,	Limited warranty ³	Some: 1-year or 3-year, depot repair service / service upgrades available			
	external monitor supp			1000 (5	" 0 0011			Some: 1-year or 3-year, limited onsite service / service upgrades available			
Display	Max resolution: 4096 21.5" (546.1mm) Ful					eian	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit			
Display	MVA panel, wide view	vina anale	e (+/- 89°). LED b	acklight	. 250 nits. 16:9 as	spect ratio.		Some: Windows 10 Ho 64-bit			
	1000:1 contrast ratio,	anti-glare	e, support Low B	lue Light	Mode			Preloaded applications (only some listed)			
Multi-touch	Optional multi-touch,	supports	10-point, AIT (A	dvanced	In-cell Touch) ted	chnology		Lenovo Vantage			
Camera	Optional 1080p came off, supports multi-de	ria, Willi d aree rotat	uai microphone, ion (horizontal 0	LED ING to 180°	ocator, physical si	WITCH OH/ 25°)		Microsoft Office preloaded; purchase a product key to activate Octobrillate Paragraph (P. (2014) for readely with D. (2014) P. (2014)			
Controls	Physical buttons on s					20)		 Cyberlink PowerDVD (only for models with DVD / ĎVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 			
Chipset	Intel B360 Chipset		·					• LinkedIn			
Rear ports*	Four USB 3.1 Gen1 (one sunn	orts Smart Powe	r On) or	ne ethernet (R.I-4	.5)	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,			
rical porto	one DisplayPort, one	optional	serial (9-pin).	•	•	•		TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified			
Side ports*	one USB 3.1 Gen2 (d	ne is Alw	ays On and fast	charge),	one USB 3.1 Typ	e-C Gen 1,		(for Full Function Monitor Stand only), TUV Low Blue Light certified, 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 fa Two M.2 Card slots (c	ctors, actua one for WI	al data transter spe _AN. one for SSI	ed may b D/Optane	e lower than theore e)	tical speed	IVIIL-OF EU 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	,	andr ALOZOO / I	wo mileli	iai speakeis (200	^ ~),		. 5. 55pa510 accessorios, proace go to interiorinal timalient vicetiii			
Nata The area (for	ations above may not be		i					Lenovo June 2019			













ThinkCentre M910z Platform Specifications

Processor	Intel® Celeron®, In	tel Pentiur	m®, or 6th / 7th G	en Intel	Core™ i3 / i5 / i7 I	Processor	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified				
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	1 ' '	* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS				
		Threads	· /		(Up to)	Graphics HD 530	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Boot sequence control 				
	Core i3-6100 Core i5-6500	2/4	3.7G 3.2G / 3.6G	3 MB 6 MB	DDR4-2133 DDR4-2133	HD 530		Kensington lock also locks chassis) • Boot without keyboard and mouse				
	Core i7-6700	4/4	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 Smart USB protection, allows keyboard/ ● Individual USB port disablement 				
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630		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		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	Wiodoc	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 or b/s, 2.5"	7200 rpm		Medianical	Toolless back cover, stand, disk, memory removal Support VESA mount (100mm)				
	Some: M.2 Solid	State Driv	e (SSD) / PCIe N	NVMe, Po				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) s, 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 Monitor stand: 23.0 X 9.6 X 18.0 (inch); (Non-touch) 19.4 / 8.8 Tilt: 45° back, -5° forward				
Graphics	Intel HD Graphics external monitor s	upport via	in processor, us DisplavPort™:	es mam	memory, DirectA	12,		Tilt: 61° back,				
	Max resolution: 40)96x2304	(DP)@60Hz, 192					With UltraFlex 23.0X 10.0 X 19.9 (inch); (Touch) 22.7 / 10.3 -5° forward; II stand: 584 X 253 X 505 (mm) (Non-touch) 20.7 / 9.4 Lift: 110mm;				
Display	23.8" (604.5mm) I	Full HD 10	080p (1920x108	0) TFT co	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 r rk as sta	atio, 1000:1 contr	ast ratio, via	Power supply	150 watts, autosensing, 85% PSU				
	DisplayPort (DP in			in ao ota	indulorio informor v	iu.						
Multi-touch	Optional Projected	l Capacitiv	ve Touch (PCT) t	echnolog	y, supports 10-po	int 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	ea focus, with au	ai microp	none, LED indica	tor, pnysicai	Preload	Preloaded operating system Preloaded applications (only some				
Controls	Physical buttons for and power on/off	or Microph	none mute, monit	or mode	switch, brightnes	s up/down,	rolodd	Some: Windows® 7 Professional 32/64 listed) preinstalled through downgrade • Microsoft Office preloaded;				
Chipset	Intel Q270 Chipse	et						rights in Windows 10 Pro 64-bit purchase a product key to activate				
Rear ports*	Four USB 3.1 Gen	1, etherne	et (RJ-45), Displa	ayPort in	out combo port,			Some: Windows 10 Pro 64-bit - Only for Window 10 Lenovo Companion				
	optional serial (9-p							- Only for Window 7				
Side ports*	Two USB 3.1 Gen one headphone / r	1 (one is <i>l</i>	Always On and ta	ist charg	e), optional card r	eader, vne-C Gen1		Lenovo Solution CenterLenovo ThinkVantage Tools				
	* Depending on man							ThinkVantage System Update				
M.2 card slot	Two M.2 Card slot							Create Recovery Media				
Audio support	High Definition (HI	D) Audio,	Realtek ALC233	/ two inte	ernal speakers (3	W x 2),	-	Adobe® Reader® Cubadial Payer DVD Create				
	Dolby [®] Audio™ cei	rtified				,,		 Cyberlink PowerDVD Create (DVD±RW) 				
WLAN ¹³	Some: 11ac wirel				QCA9377A (dual	band),	Environment	EPEAT™ Gold rating (North America); ENERGY STAR® 6.1; TCO AIO Computer				
			1 combo adapte					Certified; ULE Gold; ErP Lot 3; GREENGUARD® certified; RoHS-compliant				
	Some: 11ac wirel		Card, Qualcomm 1 combo adapte		QCA61/4A (dual	pand),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,				
	Some: 11ac wirel				eless-AC 3165,			Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)				
	Wi-Fi + Blu Some: 11ac wirel	uetooth 4. ess, M.2 (1 combo adapte Card, Intel Dual E	r, 1x1 Band Wir	•		Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com				
			1 combo adapte		ologe AC 9965							
	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, I	ntel Ether	net Connection I	219-LM ((Jacksonville), Wa	ke on LAN®						
Manageability	Intel Active Manag	gy on sor	ne modéls (requ	ire choos	sing a vPro-suppo	rt Wi-Fi						
	adapter to enable	vPro func	tion through wire	less con	nection)							
See footnotes for	more detailed informa	ation						© Lenov (M9107-Spoc) February 201				



















ThinkCentre M920z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	n Intel Co	ore™ i3 / i5 / i7 / i9	eries	Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2),
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	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		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	Caarreiter alain	adapter to enable vPro function through wireless connection)
	Core i5-8500	6/6	3.0G / 4.1G	9 MB 9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified Security slot (in rear for attachment of Power-on, admin, hard disk password)
	Core i5-8600 Core i7-8700	6/6 6/12	3.1G / 4.3G 3.2G / 4.6G	12 MB	DDR4-2666 DDR4-2666	UHD 630	Security features	optional Kensington® MicroSaver® cable; • Boot sequence control
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	-	Kensington lock also locks chassis) • Boot without keyboard and mouse
	Core i3-9300	4/4	3.7G / 4.3G	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 Mouse (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	1	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Memory Storage	32GB max (16GB SC two 260-pin SO-DIMI * System clocks down for Some: Hard Drive / S	M sockets or the proce	, dual-channel c ssors with lower m	apable nemory co	ntroller		Mechanical	Business black color Toolless back cover, stand, disk, memory removal Support VESA mount (100mm)
Otorage					support (RAID pr			Dimensions (WxDxH) Max weight (lb / kg) Adjustments
	available via Some: Solid State D Some: M.2 SSD / PO	special bi rive (SSD	d model)) / SATA 6.0Gb/s	s. 2.5"		,		Without stand (No camera): 21.3 X 1.8 X 13.7 (inch) (Touch) 14.0 / 6.34 N/A 542 X 46 X 349 (mm) (Non-touch) 13.5 / 6.13
	* 128GB SSD M.2 (2242	2) PCle NV	Me only supports f	32Gb/5 PCle 3.0 x	2, 16Gb/s			With Full Function Monitor stand (No camera):
	Some: Intel Optane ^T	[™] Memory	(not support Ce	eleron / P	entium Processo	r), M.2		21.3 X 9.9 X 15.9 to 20.2 (inch) (Non-touch) 18.2 / 8.26 Tilt: 45° back, -5° forward;
Optical	Some: DVD-ROM S Some: DVD Burner				lim (Q Omm)			542 X 252 X 405 to 514 (mm) Litt: 110mm; Swive: +/-45°
Media reader	Optional 3-in-1 media			blive, s	SIIII (3.0IIIII)			With UltraFlex III stand (No camera): 21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Tilt: 70° back, -5° forward;
Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,		542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 Lift: 136mm; Swivel: +/-45°
	external monitor supp Max resolution: 4096			x1080 (P	anel)@60Hz		Power supply	150 watts, autosensing, 90% PSU
Display	23.8" (604.5mm) Full WVA panel, wide view	II HD 1080	Op (1920x1080)	TFT cold	or , Borderless des		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
Multi-touch	1000:1 contrast ratio, monitor via DisplayPo Optional multi-touch,	, anti-glare ort (DP in	e, support Low B / out combo)	lue Light	t Mode, work as s	tandalone		Preloaded operating system Some: Windows 10 Pro 64-bit
Camera	Some: 1080p camer	ra, with du	al microphone, I	_ED indid	cator, physical sw 180°, vertical -25	itch on/off,		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
	Some: RGBIR came supports mul	era, 1080p ti-degree	with dual micro	phone, p tal 0° to	ohysical switch on 180°. vertical -25	off.		 Lenovo Vantage Microsoft Office preloaded;purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW)
Controls	Physical buttons on s	side for mi	crophone mute a	and powe	er on/off			LinkedIn
Chipset	Intel Q370 Chipset						Environment	ENERGY STAR® 7.0*. EPEAT™ Silver rating* (*not for non-OS models). ErP Lot 3.
Rear ports*	Four USB 3.1 Gen1 (5),	Environment	TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified, TUV Low Blue Light certified,
Side ports*	one USB 3.1 Gen2 (d USB 3.1 Type-C Gen	one is Alw 1, one op	ays On and fast	charge),	one USB 3.1 Ge		MIL-SPEC test	TUV Ultra Low Noise certified (on some models), RoHS-compliant MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,
M.2 card slot	combo jack (3.5mm) * Depending on many fa Two M.2 Card slots (ctors, actu	al data transfer spe	ed may b	e lower than theore	tical speed	Accessories	Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus) For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M600 Tiny Platform Specifications

Processor	Intel® Celeron® F	rocessor	N3000 Series or	Intel Penti	um® Processor	N3000 Series	Keyboard		B Keyboard (USB connector), Lenov	vo logo		
	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Memory Types	Integrated Graphics	Mayoo	Some: Lenovo USB Fingerprint Keyboard (USB connector) Some: Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black Some: Enhanced Optical USB Mouse, black, Lenovo logo				
	Celeron N3050	2/2	1.6 / 2.16 GHz	2MB	DDR3L-1600	Intel HD	Mouse		USB Mouse, black, Lenovo logo eless Mouse (2.4GHz via USB rece	eiver) black		
	Celeron J3060	2/2	1.6 / 2.48 GHz	2MB	DDR3L-1600	Intel HD 400	 Mechanical	• Tiny (1L), black color, m	nvor), black			
	Pentium N3700	4/4	1.6 / 2.4 GHz	2MB	DDR3L-1600	Intel HD	IVIECITATIICAI	Tilly (TE), black color, ill	1			
	Pentium J3710	4/4	1.6 / 2.64 GHz	2MB	DDR3L-1600	Intel HD 405			Dimensions (WxDxH)	Max weight (lb / kg)		
Chipset			C that integrates Ir es into a single sy			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	twoDisplayPort™	¹, onė opti	essor, uses main ional 3rd DP (not	memory, D support D	DirectX® 11.1, P to HDMI dong	gle) or VGA,		M600 Tiny (1L) with VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	4.12 lb (1.87 kg)		
	1920x1080(DP t	ition: 3840 o VGA do	0x2160(ĎP)@30H ngle)@60Hz; 192	Hz; 1920x1 20x1080(D	200(optional VCP 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 of 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 Optical	Some: 500GB (NAND fl Some: Solid Sta Some: external	(5400 rpm ash memo ate Drive (ODD box	r 7200 rpm, SATA	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	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*	one headphone	/ micropho	ys On and fast ch one combo jack (stereo, 3.5	imm)	,		Some: Windows 10 Pro Some: Windows 10 Hom Preloaded applications (o	ne 64-bit			
Rear ports*	one or two speci	fic USB o	0 (optional extern n some models),	ethernet (RJ-45), two Dis	playPort,		Desktop Power Manage Lenovo Solution Center	er			
I/O box*	Optional externa rear, two USB 2.	ıl İ/O box, 0 on front	rd DP, or serial on extends two USE t, via USB (occup actual data transfei	3 2.0, two l y two spec	JSB 3.0, and or cific USB 3.0 of	ne serial on M600 Tiny)		 Lenovo REACHit Lenovo SHAREit Lenovo Bluetooth Lock McAfee® LiveSafe™ (30-day trial) 				
Audio support	High Definition (I	HD) Audio	, Realtek ALC22	3 / optiona	l internal speak	er (1 watt)	1	Microsoft Office preload				
WLAN ¹³	Wi-Fi + E Some: 11ac wir Wi-Fi + E Some: 11ac wir Wi-Fi + E Some: 11ac wir	Bluetooth eless, M.2 Bluetooth eless, M.2 Bluetooth eless, M.2 Bluetooth eless, M.2	2 Card, Realtek R 4.0 combo adapt 2 Card, Qualcomr 4.1 combo adapt 2 Card, Qualcomr 4.1 combo adapt 2 Card, Intel Dual 4.0 combo adapt 2 Card, Intel Dual 4.1 combo adapt 4.1 combo adapt	er, 1x1 m Atheros er, 1x1 m Atheros er, 2x2 l Band Wire er, 1x1 l Band Wire	QCA9377 (dua QCA6174 (dua eless-AC 3165,	, .		purchase a product key to activate PowerDVD Create (DVD±RW) Lenovo ThinkVantage Tools Only for Window 10 Lenovo Companion (Win10) Cyberlink PowerDVD (DVD, DVD±RW) Lenovo QuickOptimizer Only for Window 7 Rescue and Recovery Password Manager				
Bluetooth™ Ethernet Modem	Some: Bluetoot	h 4.0 or 4	.1 wireless, integr Realtek RTL811	raťed in Wi	-Fi + BT combo e on LAN®	adapter		 ThinkVantage System L Lenovo Message Cente Adobe® Reader® 	er Plus			
Manageability Security chip	None Trusted Platform	Module,	TCG 1.2-complia	nt			Environment	ENERGY STAR® 6.0*, EP GREENGUARD®; RoHS-c	EAT™ Gold rating* (*not for non-OS compliant; Cisco EnergyWise comp	S models); atible; ErP Lot 3		
Security features	Security slot (in Kensington® M Padlock loop Smart USB promouse only, bloop Power-on passes	licroSaver otection, a ocks all st	© cable) allows keyboard/ torage devices	Hard disBoot seBoot witIndividu	strator password sk password quence control thout keyboard al USB port dis- intrusion switcl	and mouse ablement	Accessories	For compatible accessorie	es, please go to TC-AQP sheet			













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 that 7 DD to Low Voltage, DD to Living 1900, not partly, one 204 pin 60 Diving	Floor Stand	Optional system floor stand for vertical orientation				
Storage	16GB 32GB or 128GB M 2 Solid State Drive (SSD) SATA interface	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)				
Optical Onboard SATA Media reader	None SATA 6.0Gb/s controller, one connectors on planar None	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service, OID (Onsite International Delivery) / service upgrades available				
Front ports*	Two USB 3.0 (one is Always On and fast charge), one microphone (stereo, 3.5mm),		For Lenovo service upgrade options, please go to S-TC sheet				
Rear ports*	one headphone / microphone combo jack (stereo, 3.5mm) Two USB 2.0, two USB 3.0, ethernet (RJ-45), two DisplayPort, one optional port (VGA, 3rd DP, or serial on some models), one headphone; additional four serial (9-pin), one parallel (25-pin), and two PS/2 ports on 2L models *Depending on many factors, actual data transfer speed may be lower than theoretical speed None	Preload	Some: Windows Embedded Standard 7 (WES 7) Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS (Lenovo Terminal Operating System, Linux-based) Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)				
Audio support		Environment	ENERGY STAR® 6.0*, EPEAT™ Gold rating* (*not for non-OS models);				
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 		Lanava Navambar 2017				













ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo				
	ADII		Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo				
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), black color; metal case • Toolless chassis open (for models with optional toolless chassis screw)				
	A9-9420e	2	1.8 / 2.7 GHz	1 MB	DDR4-1866	Radeon R5 Series		Toolless HDD, SSD, memory, Wi-Fi removal				
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autoi	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	face face	VESA mount Floor Stand	2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
Optical Onboard SATA	None one SATA 6.0Gb	/s conne	ctor on planar				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)				
Media reader	None		·				Limited warranty ³	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available				
Graphics	Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; e-C)@6) Type-C with [280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit listed) Some: Windows 7 Professional 64 preinstalled through downgrade Preloaded applications (only some listed) - Windows 10 only - Lenovo Vantage				
Monitor cable	Optional DP to V		to DVI-D (single	link), or	DP to HDMI 1	1.4 dongle		rights in Windows 10 Pro 64-bit • LinkedIn • Microsoft Office preloaded;				
Chipset	AMD SoC platfo							purchase a product key to activate				
Front ports*	Two USB 3.1 Ge one headphone	n1 (one	is Always On ar	nd fast cl	narge), one mi	crophone (3.5mm),		 - Windows 7 only ◆ Lenovo Solution Center 				
Rear ports*	One USB 3.1 Ge two optional port Alternate Mode), * Depending on ma	en1, three s (Port 1 Port 2 fo	e USB 2.0, ethe for VGA / serial or serial)	rnet (RJ I / USB 2	-45), two Disp 2.0 Type-C (wit	layPort, th DisplayPort han theoretical speed		 Lenovo System Update Factory Recovery User Guide Viewer Microsoft Office preloaded; 				
I/O box	None	10) 4 1	D !! ! A! O!	200 1/00				purchase a product key to activate • Adobe® Reader®				
Audio support						speaker (1.5 watt)						
WLAN ¹³	Some: 11ac wire Wi-Fi + E	Bluetooth	4.2* combo ad	apter. 2x	(2	,,	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO				
Bluetooth™	Some: Bluetooth	Bluetooth n 4.2* wi	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	RTL8111HN, V	Vake on	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 (in Kensington® M Smart USB promouse only, blo Power-on pass	rear for icroSave otection, ocks all s	optional r® cable) allows keyboard	 Har Boo Boo Indi 		ord ontrol ooard and mouse ort disablement						













ThinkCentre M625 Tiny Thin Client Platform Specifications

Processor	AMD E2 series A	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo			
	APU	Coros	Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo			
	APU	Cores		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		Foolless SSD, memory, Wi-Fi removal			
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower cap	pability of memory		M625 Tiny Thin Client only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration			
Disk	Some: 32GB M. Some: 128GB 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) Some: 1-year, depot service / service upgrades available			
Graphics	AMD Radeon™	Graphic	s in processor.	uses ma	in memory. Di	rectX® 12, two		Some: 1-year, limited onsite service / service upgrades available			
·	DisplayPort™, on Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; ee-C)@6) Type-C with [280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)			
Monitor cable Chipset	Optional DP to V		to DVI-D (single	link), or	DP to HDMI	1.4 dongle	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO			
Front ports*	<u> </u>		is Always On ar	nd fast cl	narge), one mi	icrophone (3.5mm).	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,			
	Two USB 3.1 Gen1 (one is Always On and fast charge), one microphone (3.5mm) one headphone / microphone combo jack (3.5mm) One USB 3.1 Gen1, three USB 2.0, ethernet (RJ-45), two DisplayPort,							Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)			
Rear ports*	two optional port Alternate Mode),	s (Port 1 Port 2 fo	for VGA / seria or serial)	I / USB 2	2.0 Type-C (wit	th DisplayPort	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
I/O box	* Depending on ma None	any factors	, actual data trans	sfer speed	d may be lower t	han theoretical speed					
Audio support	High Definition (F	HD) Audi	o, Realtek ALC	233-VB2	2-CG / internal	speaker (1.5 watt)					
WLAN ¹³	Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E	Bluetooth eless, M. Bluetooth eless, M. Bluetooth eless, M. Bluetooth	4.2* combo ad 2 Card, Qualco 4.2* combo ad 2 Card, Realtel 4.2* combo ad 2 Card, Qualco 4.2* combo ad	apter, 13 mm Athe apter, 13 c RTL882 apter, 23 mm Athe apter, 23	x1 eros QCA9377 x1 22BE (dual ba x2 eros QCA6174 x2	7 (dual band), nd), 4A (dual band),					
Bluetooth™	Some: Bluetooth * Win 10 RS3 an	h 4.2* wii	reless, integrate	ed in Wi-l	Fi + BT combo						
Ethernet Modem	Gigabit ethernet, None					14.1					
Manageability Security chip	None Discrete TPM 2.0	,									
Security features	Security slot (in Kensington® M Smart USB promouse only, blo Power-on pass	icroSave otection, ocks all s	r® [·] cable) allows keyboard	 Har 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

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 Graphics	Security chip	Firmware TP	PM 2.0, integrated in c	chipset	ruanca control			
	Pentium Gold 5405U	2/4	2.3G	2 MB	(Up to) DDR4-2133	UHD 610	Security leatures	 Security signs Kensington 	lot (in rear for optional n® MicroSaver® cable)	 Boot sequence Boot without ke 	 Boot sequence control Boot without keyboard and mouse 			
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		 Chassis int 	port disablement					
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Power-on password Smart USB protection 						
Memory	16GB max, DDR4-266 * System automaticall	66*, one 2	260-pin SO-DIM	M socke	ets, non-ECC	ory controlle		 Administrator password Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black 						
Storage	Some: Hard Drive / S				ory controller	Keyboard Mouse				K				
Onboard SATA	Some: Solid State Dr Some: M.2 SSD (228 Some: M.2 SSD (224 One onboard SATA 6.	rive (SSD 80) / PCle 82) / PCle) / SATA 6.0Gb/s NVMe, PCIe 3. NVMe, PCIe 3.	s, 2.5" 0 x 4, 32	2Gb/s		Mechanical	Some: Lenovo Calliope Mouse (USB connector), black Tiny (1L), black color; metal case Optional dust filter One 2.5" bay for HDD/SSD, two M.2 slots (one for WLAN, one for M.2 SSD)			N, one for M.2 SSD)			
Graphics	Intel HD Graphics 61	0/620 in	processor uses	main m	emory DirectX®	12 one	1		Dime	ensions (WxDxH)	Weight (Approx.)			
·	DisplayPort™, one HD Max resolution: 4096x	MI, up to 2304 (DF	2 independent (P)@60Hz; 4096x	displays 2304 (H	,	12, 0110		Tiny only		" X 7.20" X 1.36" . 182.9mm X 34.5mm	2.91 lb (1.32 kg), vary by config			
Monitor cable	Optional DP to VGA d	ongle or	DP to HDMI 1.4	dongle	,		VESA mount	None						
Chipset	Intel SoC (System or	n Chip) p	latform				Floor Stand	Optional system floor stand for vertical orientation						
Front ports* (Std.)	One USB 3.1 Gen1, o				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 vo 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						
	* 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	nternal s	peaker (1.5 watt))]	Some: Wind	idows® 10 Pro 64-bit idows 10 Home 64-bit					
WLAN	Some: 11ac wireless,				(dual band),		1		applications (only so					
	Some: 11ac wireless Wi-Fi + Blueto	ombo adapter, 2	822BE 2x2	,,,			Lenovo Vantage Microsoft Office preloaded; purchase a product key to activate							
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2							• LinkedIn	a product key to active	ale				
							Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, RoHS-compliant, WEEL, REACH						
Bluetooth	Some: Bluetooth 4.2			-Fi + BT	combo adapter		MIL-SPEC test	Coming soon						
Ethernet Ethernet (Opt.)	Gigabit ethernet, Real None	itek HTL	3111HN-CG				Accessories	For compatible accessories, please go to http://smartfind.lenovo.com						

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













ThinkCentre M710 SFF Platform Specifications

Processor	Intel® Celeron®, Int	tel Pentiur	n®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5	/ i7 Processor	Security features	Security slot (in rear for optional	Power-on password		
1 10000001		Cores /	Frequency		Memory Support			Kensington® MicroSaver® cable) • Administrator password			
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Padlock loopSmart USB protection, allows keyboard/	Hard disk passwordBoot sequence control		
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		mouse only, blocks all storage devices	Boot without keyboard and mouse		
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		 Optional cable lock to physically lock 	 Individual 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 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 Traditional Keyboard (USB Some: Lenovo Calliope Wireless Keyboar	d (2.4GHz via USB receiver), black		
	Core i3-7100	2/4	3.4G / 4.0G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB conr	nector), black		
	Core i5-7100	4/4	3.0G / 3.5G	6 MB	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	 SFF (8.4L), black color; metal case 			
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm >			
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		 Approx. 13.2 lb (6.0 kg), weight may vary Toolless cover, disk, optical removal 	by configuration		
Memory	64GB max, UDIMN	J DDR4-	2400 four 288-n	in DIMM	sockets non-EC			Optional dust filter			
Wellioly	dual-channel capa		2400, Ioui 200-p		SOCKEIS, HOH-LO	Ο,		Bay 1: Slim external ODD bay			
	* System automati		ks down for the p	rocesso	rs with lower mem	nory controlle	r	Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional b	av)		
Storage	Some: Hard Drive	/ SATA 6	.0Gb/s, 2.5" or 3	5", 5400	rpm or 7200 rpm	1		Slot 1: low-profile (length < 150mm, height	< 68mm), PCIe 3.0 x16*		
	Some: Solid State					/0		Slot 2: low-profile (length < 150mm, height			
	Some: M.2 Solid Some: Intel Optar	otate Driv ne™ Memo	orv (models with	7th aen	Core processor).	M.2		Slot 3: low-profile (length < 150mm, height Slot 4: no slot, only bracket for optional por			
Optical	Some: DVD-ROM	1 SATA 1.5	Gb/s Drive, slim	(9.0 mm))			M.2 card slots: Two (one for WLAN, one for	r SSD/Optane)		
O :- In a court O ATA	Some: DVD Burn			b/s Drive	, slim (9.0mm)			* Optional 2 front USB3.1 Type-C ports mo	odule occupies PCIe x16 slot (x4 card),		
Onboard SATA Media reader	Three onboard SA Optional 7-in-1 me						Floor Stand	optional rear 2x USB2.0 / parallel / 2nd ser Optional system floor stand for vertical orie			
Graphics	Intel HD Graphics			essor us	es main memory	DirectX® 12	-				
Стартнос	one VGA, two Disp						rower supply	Some: 180 watts, autosensing, 85% PS Some: 210 watts, autosensing, 85% PS			
	discrete graphics t			0.4500	() (O A) @ FOLL-				SU (only available via special bid)		
	Max resolution: 40 Some: NVIDIA Ge two Display	force® G	r̃ 730 , DirectX 12	8x1536 2, 2GB, F	(VGA)@50Hz PCle 2.0 x8 adapt	er,	Limited warranty ³	Some: 1-year or 3-year, depot service / Some: 1-year or 3-year, limited onsite s			
Monitor cable		tion: 3840	x2160 (DisplayP	ort)@60	Hz;		Preload	Preloaded operating system			
			JVI-D (Sirigle lilik), DF 10	dual DF, of DF to	TDIVII 1.4	_	Some: Windows® 7 Professional 32/64			
Chipset	Intel B250 Chipse							preinstalled through downgrade rights in Windows 10 Pro 64-bit			
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		(not available with 7th Gen Intel			
Rear ports*	bid), microphone (3 Two USB 3.1 Gen	3.511111), 1 1. two US	B 2.0. optional tw	1111) 70 USB 2	2.0. serial (9-pin).	optional 2nd		processor) Some: Windows 10 Pro 64-bit			
	serial (9-pin), optic	nal parall	el (25-pin), ether				,	Some: Windows 10 F10 04-bit			
	two PS/2 ports (ke							Preloaded applications (only some			
Rear audio norts	additional DisplayF Line-in (3.5mm), lin	ort on op	tional graphics o	n some i	models			listed)			
IEEE 1394*	None	ne-out (3.	omm), microphol	16-111 (3.0	5111111)			Microsoft Office preloaded; purchase a product key to activate			
	* Depending on many	y factors, a	ctual data transfer s	speed may	be lower than theo	retical speed		- Only for Window 10			
Audio support	High Definition (HD	D) Audio, I	Realtek ALC662	/ optiona	al internal speake	r (1.5 watt)		Lenovo Companion			
WLAN ¹³	Some: 11ac wirele	ess, M.2 (Card, Qualcomm	Atheros	QCA9377A (dua	l band),		Only for Window 7Lenovo Solution Center			
			1 combo adapte		OCA6174A /J	l band)		Lenovo Solution Center Lenovo ThinkVantage Tools			
	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2							Create Recovery Media			
	Some: 11ac wirele	ess, M.2 (Card, Intel Dual E	Band Wir	eless-AC 3165,			 Adobe® Reader® Cyberlink PowerDVD Create 			
			1 combo adapte		-1 40 0005			(DVD±RW)			
	Some: 11ac wirele		Card, Intel Dual E 1 combo adaptei		eiess-AC 8265,		Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating	(North America).		
Bluetooth™	Some: Bluetooth	4.1 wireles	ss, integrated in '	Ŵi-Fi + E	BT combo adapte	r		ErP Lot 3, GREENGUARD®, RoHS-compli	ant,		
Ethernet	Gigabit ethernet, F	Realtek RT	ΓL8111ĞN, Wake	on LAN	[®			TUV low noise verified (on some models)			
Modem	None						Accessories	For compatible accessories, please go to	nttp://www.lenovoquickpick.com		
Manageability Security chip	None TPM (Trusted Plati	form Mad	ulo) 2.0. TCC Co	rtifica							
Security criip	* Downgrade to TF				G Win7 32 OS						
	,										













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	Saver [®] cable) ● Hard disk pa	ver® cable) • Hard disk password			
	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 disa 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 Callid	ope Wireless Keyboard (2.4GHz via	USB receiver), black			
	Core i7-6700T	4/8	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Callid	ope Mouse (USB connector), black	<i>,</i> .			
	Core i3-7100T	2/4	3.4G	3 MB	DDR4-2400	HD 630		Some: Lenovo Callid	ope Wireless Mouse (2.4GHz via US	B receiver), black			
	Core i5-7400T	4/4	2.4G / 3.0G	6 MB	DDR4-2400	HD 630	Mechanical	Tiny (1L), black color; metal case					
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2400	HD 630		Toolless chassis open					
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630		 Toolless HDD, SSE Optional toolless c 					
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630		 Optional dust filter 	nassis screw				
Memory	32GB max, DDR4- dual-channel capa		o 260-pin SO-DI	MM sock	ets, non-ECC,			M740 Time and	Dimensions (WxDxH)	Weight (Approx.)			
Ctorogo	* System automatic	cally clock				ory controller		M710 Tiny only	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.91 lb (1.32 kg), vary by config			
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Drive (S	SD) / SATA 6.0Gb	o/s, 2.5"		le.		With VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config			
Optical	Some: Intel Optan Some: DVD-ROM	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		With VESA mount & I/O box	7.42" X 7.30" X 2.62" 188.4mm X 185.38mm X 66.6mm	3.66 lb (1.66 kg), vary by config			
•	Some: DVD Burne	er (DVϱF	RW), slim (9.0mm			box	VESA mount		nt bracket kit, supports VESA 75mm				
Onboard SATA Media reader	One onboard SATA None	4 6.0GD/S	connector				Floor Stand	Optional system floo	r stand for vertical orientation				
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 (not incloter, autosensing, 88% PSU (only for	r models with I/O box)			
	Max resolution: 40	96x2304 (6x2304 ((Type-C)@60Hz;			Some: 1-year or 3-	year, depot service / service upgrad year, limited onsite service / servic				
Monitor cable	Optional DP to VG	A, DP to [HDMI 1.4	Preload	Some: Windows® 7 preinstalled	Professional 32/64 through downgrade				
Chipset	Intel B250 Chipse	et						rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processor) Some: Windows 10 Pro 64-bit Some: Windows 10 Home 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),							
Rear ports*	one headphone / n Four USB 3.1 Gen or two specific USB	1 (optiona	ıl external optical	box or e									
	two optional ports (with DisplayPort A	(Port 1 for Iternate N	VGA / 3rd DP / I lode), Port 2 for	HĎMI / s serial)	erial / USB 3.1 Ty	pe-C Gen 1		Preloaded applicati listed) • Microsoft Office pr	, ,				
I/O box*	Optional external I/ on rear, two USB 2 Tiny)							purchase a production of the p	t key to activate				
	* Depending on many	/ factors. ac	tual data transfer s	peed may	be lower than theo	retical speed		 Lenovo Companio 					
Audio support	High Definition (HD			· ·				- Only for Window 7	ontor				
WLAN ¹³	Some: 11ac wirele	,			•	,	1	Lenovo Solution CLenovo ThinkVanta					
VVLAIN		etooth 4.	1 combo adapter	, 1x1	`	,,		Create Recovery N Adobe® Reader®					
		etooth 4.	1 combo adapter	, 2x2	,	banuj,		Cyberlink PowerD\ (DVD±RW)	/D Create				
	Wi-Fi + Blu	etooth 4.	1 combo adapter	, 1x1			Environment	ENERGY STAR® 6.1	, EPEAT™ Gold rating (North Americ	ca),			
		etooth 4.	1 combo adapter	, 2x2				ErP Lot 3, GREENG TUV low noise verifie	UARD®, RoHS-compliant,	•			
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None						MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperatu Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, SI					
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	Fungus, Solar Radiation) 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/ Hard disk password 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 sequence control
	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	Wiodoc	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	rocessoi	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, P(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	(9.0mm)			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	Intel B250 Chipse		ol two LICE 2.1 To	ma C Ga	on 2 (only available	a via anacial	_	(not available with 7th Gen Intel - Only for Window 10 processor) • Lenovo Companion
Front ports*	Four USB 3.1 Gen bid), microphone (3	3.5mm), h	eadphone (3.5m	im)				Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit - Only for Window 7 Lenovo Solution Center
Rear ports*	Two USB 3.1 Gen1 serial (9-pin), optio two PS/2 ports (key	nal parall yboard/m	el (25-pin), ether ouse);	net (RJ-	45), one VGA, two	DisplayPort,		 Lenovo ThinkVantage Tools Create Recovery Media Adobe® Reader®
Rear audio ports* IEEE 1394*	additional VGA, Dis Line-in (3.5mm), lir None	ne-out (3.	5mm), microphoi	ne-in (3.	5mm)	oueis		 Cyberlink PowerDVD Create (DVD±RW)
	* Depending on many	/ factors, ad	ctual data transfer s	speed may	y 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	For companione accessories, please go to http://www.ienovoquickpick.com
	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							
							1	













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron®, Int			eration I	1		Security features	 S • 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 sequer mouse only, blocks all storage devices Boot withou 	nce control t keyboard and mouse		
	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	المساح المالم مسمم 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 1), 0	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 down in Windows 10 Pro 64-bit(not available with 7th Gen Intel			
Graphics	Intel HD Graphics			essor us	ses main memory	DirectX® 12	1				
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 product kny 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	icanck in	0 ,								
Ethernet		leaner i					_				













ThinkCentre M715 SFF Platform Specifications

						lo "					
Processor	AMD A6 / A8 / A10 / A1			/ 5 / 7 series	·	Security features	Security slot (in rear for optional Kensington® MicroSaver® cable) Administrator password				
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics		Rensington Microsaver cable) Padlock loop Hard disk password Smart USB protection, allows keyboard/ 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 Seri					Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	PRO A12-8870 4 / 4 3.7 / 4.2 2MB Radeon R7 Serie					Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black				
	PRO A8-9600	4 / 4	3.1 / 3.4	2MB	Radeon R7 Series	Mechanical	SFF (8.4L), black color; metal case				
	PRO A10-9700	4 / 4	3.5 / 3.8	2MB	Radeon R7 Series	Moonanicai	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm				
	PRO A12-9800	4 / 4	3.8 / 4.2	2MB	Radeon R7 Series		 Approx. 13.2 lb (6.0 kg), weight may vary by configuration 				
Memory	64GB max, UDIMM, DI dual-channel capable* * System automatically	clocks 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);	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	o with the ray	Lon process	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	orts 3 independent	Limited warranty ³ Preload	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	displays (supports maximum of 2 concurrent HDMI/DVI displays when using HI port or DP to DVI/HDMI dongles); Max resolution: 4096x2160 (DP)@60Hz; 4096x2160 (HDMI)@30Hz;						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	d three U 2.0 on s	JSB 2.0 (options some models).	e combo jack (stereo, 3.5mm) 2.0 (optional external optical box or I/O box occupies le models), 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	serial on some models), one headphone SB 2.0 (two on front and two on rear), one y one specific USB 2.0 of M715q Tiny) fer speed may be lower than 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	HD) Audi	o, 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
	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® None				2 eros QCA9377 1	7 (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
Bluetooth™ Ethernet Modem						combo adapter		
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, TCG Certified							
Security features	 Security slot (ir Kensington® Mi Padlock loop Smart USB pro mouse only, blo Power-on pass 	icroSave tection, ocks all s	er ^{®'} cable) allows keyboard	 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		L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Hard disk password Boot sequence control Boot without keyboard and mous Individual USB port disablement			
	Athlon 200GE Athlon PRO 200GE	2/4	3.2 GHz 3.2 GHz	1 MB / 4MB 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	IVIOUSC	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, b			
	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				
	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 Preloaded applications (only some listed) - Windows 10 only Lenovo Vantage Microsoft Office preloaded; purchase a product key to activate			
Chipset	AMD B300 Chipset	:		-		-		 Cyberlink PowerDVD (only for mod 			
. ,) 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 mod with DVD±RW)			
Hear ports" (Std.) One USB 3.1 Gen1 one headphoneone	and thre	ee USB 2.0, e	etnernet (H.	1-45), 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 wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band),						MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand and Dust, Vibration, Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Humidity, Sand Shock, Shock			
	Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: Bluetooth 4.2* wireless, integrated in Wi-Fi + BT combo adapter					, , , , , , , , , , , , , , , , , , , ,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Bluetooth Ethernet	* Hardware supports BT 4.2, but Win10 RS3 and earlier only supports BT 4.1 Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®				rlier only sui						
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 ser	ies APUs				Keyboard		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		_), black color; metal case iny only:		
	PRO A10-8770E	4	2.8 / 3.5 GHz	2 MB	DDR4-2400 DDR4-2400	Radeon R7 Series		7.05" W	7 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		I.3 kg), weight may vary by configuration		
Memory	4GB max, DDR4					na opoolai bia modolo	Floor Stand		al VESA mount bracket kit, supports VESA 75mm and 100mm		
Disk	Some: 256GB So	,	<u>'</u>				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO model			
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	.2 Solid	State Drive (SS	SD) / PC	ie NVMe interi	ace	Preload		ded operating system		
Onboard SATA	One SATA cable ((1-drop t	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		, , , , , , , , , , , , , , , , , , , ,		
						orts 3 independent s when using HDMI	Livioiiiicii	ENERGY STAR® 6.1*, EPEAT™ Gold rating* (*not for non-OS models) ErP Lot 3; GREENGUARD®; RoHS-compliant			
	port or DP to DVI	/HDMI d	longles);		, ,	J	Accessories	For com	npatible accessories, please go to http://www.lenovoquickpick.com		
	Max resolution: 40				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 (sterec	, 3.5mm)						
Rear ports*	one usb 3.0 and one specific USB	tnree t 2 0 on 9	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					
1/0 1		ny factors	, actual data trans	sfer speed	l may be lower t	han theoretical speed					
I/O box	None	ID) 4 II	D 11 1 11 0								
Audio support	High Definition (H		*			,					
WLAN ¹³	Some: 11ac wire		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	Gigabit ethernet,	Realtek	RTL8111EPV,	Wake or	LAN®						
Modem	None										
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0	TCG C	ertified								
Security features	Security slot (in	,		• Adr	ninistrator pas	sword					
•	Kensington® Mic				d disk passwo						
	Padlock loop				ot sequence co						
	 Smart USB promouse only, blo 					oard and mouse ort disablement					
	Power-on passy				assis intrusion						













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

Processor	AMD Athlon, A6, A10	0. or Rvz	en processor				Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	APU Athlon PRO 200GE	Cores / Threads 2 / 4	Frequency	L2 / L3 Cache Memory Support (Up to) Integrated Graphics 1 MB / 4MB DDR4-2933 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 (SSI	/ SATA inte)) / PCIe N\	erface VMe, PCIe 3	.0 x 2	VESA mount	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	drop to de	evice), one S	ATA 6.0Gb/s	s connector	on planar	Floor Stand	Optional system floor stand for vertical orientation
Graphics	AMD Radeon™ 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 1920	OMI dong 6x2160 ([0x1200 (\	les, and Athlo DP)@60Hz; 4 VGA)@60Hz	on / Athlon 096x2160 (PRO onlý su (HDMI) @ 30l	ıpport 2 displays); Hz;	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, I	DP to DVI-D	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	none / mi	crophone cor	nbo jack (st	tereo, 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 (HJ-	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	tual data transfe	er speed may	be lower than	theoretical speed		3 · · · · · · · · · · · · · · · · · · ·
Audio support	High Definition (HD)	Audio, R	Realtek ALC2	33-VB2 / int	ternal 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 wireles Wi-Fi + Bluet Some: Bluetooth 4.2 * Hardware supports	tooth 4.2 s, M.2 Cotooth 4.2 s, M.2 Cotooth 4.2 s, M.2 Cotooth 4.2 s, M.2 Cotooth 4.2 2* wireles	* combo ada ard, Qualcom * combo ada ard, Realtek * combo ada ard, Qualcom * combo ada ss, integrated	oter, 1x1 Im Atheros oter, 1x1 RTL8822BE oter, 2x2 Im Atheros oter, 2x2 In Wi-Fi + I	QCA9377 (c E (dual band QCA6174A BT combo ac	dual band),), (dual band), dapter		
Ethernet	Gigabit ethernet, Rea					00113 101 4.1		
Manageability Security chip Security features	DASH 1.0/1.1 Discrete TPM 2.0, TO			- A almadic ! -				
Coounty location	 Security slot (in rea Kensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on passworn 	Saver® c tion, allow all stora	able) ws keyboard/	Hard disBoot seeBoot witIndividual	strator password password quence contained thout keyboa al USB port a 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) • Padlock loop • Administrator password • Hard disk password			
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		Smart USB protection, allows keyboard/ 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), PCle 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 2.0 x1* Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 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								
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 PCle 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, PCIe 2.0 x	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)			
	Max resolution: Some: AMD Radeon™ one VGA, one H	RX 550, D IDMI, one D	rectX 12, 2GB isplayPort, 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)	amambiaa co -			Only for Window 7Lenovo 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 (ວ.ວmm),	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® Cub addid to Rever DVD Create (DVD - DVD)			
Audio support	High Definition (HD) Au		•			Environment	Cyberlink PowerDVD Create (DVD±RW) ENERGY STAR® 6.1 EREAT™ Cold rating (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, 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® None									
Bluetooth™ Ethernet Modem										
	-					1				













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
ļ	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
ļ	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
ļ	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®
ļ	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 UHD 630	Manageability	None
ļ	Core i5-8400 Core i5-8500	6/6 6/6	2.8G / 4.0G 3.0G / 4.1G	9 MB 9 MB	DDR4-2666 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 optional Power-on password
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		Kensington® MicroSaver® cable) • Administrator password
ļ	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
ļ	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
ļ	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	Kanda a a cal	mouse only, blocks all storage devices
ļ	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
ļ	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
ļ	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB		UHD 630	Mayroo	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
Memory	64GB max, UDIMM, [DR4-266	66 four 288-nin l	DIMM so	ckets non-FCC		Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	dual-channel capable		50, 1001 200 pii i	Dilviivi 00	onoto, non 200,			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	* System automaticall	ly clocks of	down for the prod	cessors v	vith lower memor	y controlle	r	Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	Some: Hard Drive / Some: Solid State Dr Some: M.2 Solid State * M.2 SSD (2242) PC Some: Intel Optane™	rive (SSD te Drive (Ie NVMe) / SATA 6.0Gb/s SSD) / PCIe NVI only supports P0	s, 2.5" Me, PCle Cle 3.0 x	3.0 x 4*, 32Gb/s 2, 16Gb/s		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 Toolless cover, disk, optical, and extension card removal
Optical	Some: DVD-ROM SA Some: DVD Burner (4TA 1.5GI	o/s Drive, slim (9	.0mm)), IVI.Z		Optional dust filter Bay 1: Slim external ODD bay Bay 2: Slim external IDD/CCD
Onboard SATA	Three onboard SATA	6.0Gb/s c	connectors	Diivo, o	(0.011111)			Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional bay)
Graphics	Optional 7-in-1 media Intel UHD Graphics (610/630 ii					<u> </u> 	Slot 1: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x16 Slot 2: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1
	one VGA, two Display discrete graphics to s			ndent dis	splays, works alor	ng with		Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension
	Max resolution: 4096x			1536 (VC	GA)@50Hz			M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	Some: NVIDIA Gefor	ce® GŤ 7	30, DirectX 12, 2			r,	Floor Stand	Optional system floor stand for vertical orientation
	two DisplayPo	rt, 35 wat	ts;	N @ COL!-			Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor cable	<i>Max resolutior</i> Optional DP to VGA d	1. 3840X2 Ionale Di	160 (DisplayPort	i)⊯bUHZ e. DP to	; dual DP dongle (i	for Collage	1	Some: 210 watts, autosensing, 85% PSU
	Display with intel integ					ioi conage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
	Intel B360 Chipset		. , ,				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
	2x USB 3.1 Gen2, 2x 1x microphone (3.5mi						Preload	Preloaded operating system
Front ports* (Opt.) Rear ports* (Std.) Rear ports* (Opt.)	Optional: 1x media readx USB 2.0, 1x serial 1x line-out (3.5mm) Optional: 2x USB 3.1 (special bid only), 1x 2	ader (9-pin), 1 Gen1 via	x ethernet (RJ-4 PCI2 x1**, 2x U	5), 1x VG SB 3.1 Ty	GA, 2x DisplayPor ype-C Gen2 via F	rt, PCIe x4**		Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Preloaded applications (only some listed) • Lenovo Vantage • Microsoft Office preloaded;
	pin), 2x PS/2 ports (ke optional graphics or e * Depending on many fac ** Choose either 2x USB	eyboard/n thernet ca ctors, actua	nouse), additiona ard al data transfer spe	al RJ-45 ed may be	and video ports a lower than theoretic	vailable or	1	 purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) LinkedIn
Audio support	High Definition (HD) A	Audio, Rea	altek ALC233VB	2 / intern	al speaker (2 wat	tt)	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
WLAN	Some: 11ac wireless Wi-Fi + Blueto		d, Realtek RTL8		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, TCG Certified S • Security slot (in rear for optional • Boot sequence control						
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	Security leatures	 Security slot (in real Kensington® Micros 	ar for optional	Boot sequence Boot without key	control			
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		 Kensington® MicroSaver® cable) Chassis intrusion switch Boot without keyboard an Individual USB port disable 		port disablement				
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		 Power-on password 	d	 Smart USB prof 	ection, allows keyboard/			
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Administrator passy	word	mouse only, blo	cks all storage devices			
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		Hard disk password						
	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),			JSB receiver), black			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callic	pe Mouse (USB	connector), black	Job Todolvol), Black			
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Finge	erprint Mouse (US	SB connector), Wind	lows Hello support, black			
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Callic	<u>'</u>	se (2.4GHz via USI	3 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	pen (need optiona	l toolless chassis s	crew)			
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		 Optional dust filter 	, memory remova	11				
	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" HDD	D/SSD and PClė 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			Tiny only		.20" X 1.36"	2.91 lb (1.32 kg),			
Wellioly	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	-	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			
9	Some: Solid State Dr	rive (SSD) / SATA 6.0Gb/s	, 2.5"	•			Optional VESA moun	at bracket kit, cupr	oorto VESA 75mm (and 100mm			
	Some: M.2 SSD / PC				210 2 0 v 0 160h	10	VESA mount Floor Stand	Optional system floor	r stand for vertical	l orientation	and roomin			
	* 128GB SSD M.2 (22 Some: Intel Optane™	42) POIE Memory	(not support Ce	ports Pt Ieron / F	Pentium Processo	or) M 2								
Optical	Some: DVD-ROM, sli	im (9.0mr	n), via ÚSB exte	rnal OD	D box	*	Power supply	Some: 65 watts AC/I Some: 90 watts AC/I	DC adapter, autos	sensing, 88% PSU				
	Some: DVD Burner (DVD±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		<u> </u>				
Graphics	Intel HD Graphics 61						Limited Warranty	Some: 1-year or 3-y						
	DisplayPort™, one HE or USB 3.1 Type-C Ge						Preload	Preloaded operating system						
							USB 3.1 Type-C Gen1 with DisplayPort function), up to 3 independent display ax resolution: 4096x2304 (DP) @ 60Hz; 4096x2304 (Type-C) @ 60Hz;						Some: Windows® 10	
	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 applicationLenovo Vantage	ons (only some	listea)				
	Display with intel integ	grated gra	ipnics), or DP to	ו וואוטא	.4 dongle		-	 Microsoft Office pre 	eloaded:					
Chipset	Intel B360 Chipset							purchase a produc	t key to activate					
Front ports* (Std.)	one USB 3.1 Gen1 (A							 Cyberlink PowerDV 			RW)			
Bear porte* (Std.)	one microphone (3.5n 2x USB 3.1 Gen2, 2x	nm), one	neadphone / mid Gant 1v othern	crophon	e combo jack (3.5	omm) rt 1v HDMI		Cyberlink Power2GLinkedIn	O (only for mode	els with DVD±RVV)				
Rear ports* (Opt.)	Two optional ports (m	utually ex	clusive with PCI	e card):	Port 1 for VGA /	2nd DP /	Environment		EDEATM Cold w	atina (North Amoria	a) F*DI at 2 TOO			
(-	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. TUV ultra low noise v	, EPEAL TO GOID 18	aung (North Amenc	a), EIP LOI 3, TCO,			
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	-pin) via	MIL-SPEC test				de], High Temperature,			
	PCIe x1 * Depending on many fac	etore actua	al data transfer sne	ad may h	e lower than theore	tical speed	WIL-SI LO lest	Low Temperature. Te	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),									
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2										
	Some: 11ac wireless				ess-AC 3165,									
	Some: 11ac wireless		ombo adapter, 1 d. Intel Dual Bar		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													
Eulernet (Opt.)	Come. mel Ememel	OGIVEI AL	iapiei 1000-14, (igavii e	шонгон, 4 х по-40	, 1 OIC X4	<u> </u>							













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th Generati	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 t tl-TM	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® Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	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 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 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-	20000ro	with lower memor	rı, controllo	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
01	* System automatical					ry controller	_	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Storage	Some: Hard Drive / S Some: Solid State Drive	SAIA 6.00 riva (SSD	3D/S, 2.5" or 3.5") / SATA 6 0Gb/s	, 5400 rp	om or 7200 rpm			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	Wiconanical	• (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 Bout 1 Clim automat ODD have
Onboard SATA	Three onboard SATA			, Diivo, c	(0.011111)			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							Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 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
	Some: NVIDIA Gefor					er,		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	two DisplayPo				·		Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor Cable	Max resolution Optional DP to VGA		160 (DisplayPor			for Collago		Some: 210 watts, autosensing, 85% PSU
World Gable	Display with intel integ					(ioi Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
Chipset	Intel B360 Chipset	9 9					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 cha	arging),	Preload	Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system
, , ,	1x microphone (3.5m	m), 1x he					1 TOTOAU	Some: Windows® 10 Pro 64-bit
Front ports* (Opt.	Optional: 1x media re	ader		- \	04 0 0: 1 0			Some: Windows 10 Home 64-bit
near ports (Stu.)	4x USB 2.0, 1x serial 1x line-out (3.5mm)	(9-pin), 1	x etnernet (HJ-4	5), 1X V	JA, 2x DisplayPo	rτ,		Preloaded applications (only some listed)
Rear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCIe x1**, 2x U	SB 3.1 T	vpe-C Gen2 via F	PCle x4**		Lenovo VantageMicrosoft Office preloaded;
	(special bid only), 1x	2nd seria	l (9-pin), 4x seria	al (9-pin)	via PCIe x1,			purchase a product key to activate
	1x parallel (25-pin), 2				dditional RJ-45 ai	nd video		 Cyberlink PowerDVD (only for models with DVD / DVD±RW)
	ports available on opt * Depending on many fac-				e lower than theore	tical speed		Cyberlink Power2GO (only for models with DVD±RW)
	** Choose either 2x USB					ai opoou		• LinkedIn
Audio support	High Definition (HD)	Audio, Re	altek ALC233VB	2 / interr	nal speaker (2 wa	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
							•	













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	Radeon RX Vega 11	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Ryzen 5 PRO 2600	6/12	3.4 / 3.9	3MB / 16MB		None	l to y b 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			
Mamari	64GB max, UDIMM		0666* form	OO nin DIM	M applicate in	on FCC	Mauaa	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
Memory	dual-channel capab		2000 , IOUI 2	ואווט וווט 200	ivi sockets, n	1011-ECC,	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
	* Systemboard supp		to 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		 -	iviculalillal	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm			
	Some: M.2 SSD / F	PCIe NVI	Me, PCIe 3.0	0 x 4*, 32Gb	/s			• Approx. 13.2 lb (6.0 kg), weight may vary by configuration			
				nd AMD A6	/ A8 / A10 / .	A12 processor only		Toolless cover, disk, optical removal			
Ontical	supports PCle 3.0 > Some: DVD-ROM	(2, 16GD	ICh/o Drivo	olim (O Omn	2)			Optional dust filter			
Optical	Some: DVD-nOW	or (DVD+F	RM/) SATA 1	51111 (9.01111 I 5Gh/s Driv	1) e slim (9.0n	nm)		Bay 1: Slim external ODD bay			
Onboard SATA	Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm) Three onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only							Baý 2: 3.5", nternal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk)			
	available via special bid model) Optional 7-in-1 media reader							Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1			
Media reader											
Graphics	AMD Radeon™ Gra	aphics ir	processo	r (only for so	me process	ors), uses main]	Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1			
·	memory, DirectX® 12, one VGA, two DisplayPort™ (Onboard VC					rd VGA and DP ports		Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0			
	are only available on the models with integrated graphics), supports 3 independent displays, works along with AMD discrete graphics to support more displays; Max resolution: 4096x2160 (DP)@60Hz; 1920x1200 (VGA)@60Hz						Floor Stand	M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation			
	Some: NVIDIA Gef	orce® GT	730 Direc	tX 12 2GB	GDDR5 PC	le 2 0 x16 (x8 elec)	Power supply	Some: 180 watts, autosensing, 85% PSU			
	adapter, two	Display	Port, 35 wat	ts;	0.22.10, . 0	.o =.o x .o (xo o.oo.)		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)			
	Max resolution: 3840x2160 (DisplayPort) @60Hz Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle,										
Monitor cable	Optional DP to VGA or DP to HDMI 1.4	A dongle,	DP to DVI-E	O 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	Preloaded operating system Some: Windows 10 Pro 64-bit			
			1 Con1 1v	miaranhan	(2 Emm) 1	v baadabaaa	-	Some: Windows 10 Home 64-bit			
Front ports" (Sta.,) 2x USB 3.1 Gen2, 2 (3.5mm)	2X USB 3	. i Geni, ix	microphone	e (3.5mm), 1	x neadphone		Preloaded applications (only some listed)			
Front ports* (Opt.) Optional: 1x media	reader. 2	x USB 3.1 T	vpe-C Gen2	via PCIe ca	ard (special bid only)		Lenovo Vantage			
	2x USB 3.1 Gen1, 2	2x USB 2	.0, 1x serial	(9-pin), 1x	ethernet (RJ	-45), 1x VGA**,		Microsoft Office preloaded; purchase a preduct key to petivote.			
. ,	2x DisplayPort**, 2x	⟨PS/2 po	rts (keyboa	rd / mouse);	1x line-in (3	.5mm), 1x line-out		 purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) 			
D + (O - +)	(3.5mm), 1x microp				- (OF!)	- 1-190 1 D 1 45		Cyberlink Power2GO (only for models with DVD±RW)			
near ports" (Opt.,) Optional: 2x USB 2 and video ports ava	2.U, TX 2N silable on	u seriai (9-p	only, 1x para	ilei (25-pin),	auditional HJ-45		• LinkedIn			
	* Depending on many	factore ac	tual data tran	efor enood me		an theoretical speed	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);			
	** only available on the	e models w	vith integrated	graphics	ay be lower the	an incorelical speed		ErP Lot 3; RoHS-compliant			
Audio support	High Definition (HD) Audio, F	Realtek ALC	662 / option			Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
WLAN	Some: 11ac wireles	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),									
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1										
		ome: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 1x1 ome: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2				A (dual band),					
	WI-FI + Blue					d)					
	Wi-Fi + Rhu					u),					
	Some: 11ac wirele	ss, M.2 C	Card, Qualco	omm Athero	s QCA6174	A (dual band),					
	Wi-Fi + Blue	etooth 4.2	2* cómbo ac	dapter, 2x2		,,					
Bluetooth™	Some: Bluetooth 4	.2* wirele	ess, integrate	ed in Wi-Fi ⊣							
	* Hardware support	IS BT 4.2,	but Win10	HS3 and ea	rlier only sup	oports BT 4.1]				



ThinkCentre M90n-1 Nano Platform Specifications

Processor	Intel® 8th Generation	Intel Core	e™ i3 / i5 / i7 Pro	cessor			Manageability	Intel vPro technology	v 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	ro function through CG Certified		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620	Security features	Security slot (in rear for optional Kensington® MicroSaver® cable) Boot sequence control Boot without keyboard a			
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620					
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		Chassis intrusion sPower-on passwor		 Individual USB Smart LISB pro 	port disablement tection, allows keyboard/
	Core i7-8665U	4/8	1.9G / 4.8G	8 MB	DDR4-2400	UHD 620		Administrator pass			cks all storage devices
Memory	8GB or 16GB / DDR						Keyboard	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black			Κ
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane	2 SSD 5D / PCIe I 5D / PCIe I ™ Memory	NVMe, PCIe 3.0 NVMe, PCIe 3.0	x 4* x 2 State St			Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello 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 color; metal case Three M.2 slots: two for M.2 SSD (one PCle 3.0 x4 and one PCle 3.0 x2) and or for WLAN			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 U displays; Max resolution: 4096	,,		' '	, ·	naepenaent		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						Floor Stand	Some: DIN rail mount bracket kit None			
Front ports (Std.)	*2x USB 3.1 Gen2, 1)	CUSB 3.1	Type-C Gen 2, c	ne head	dphone / microph	one combo	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (Not for TIO models)			
Rear ports (Std.)	jack (3.5mm) (Std.)* 2x USB 3.1 Gen2, 1x USB 3.1 Type-C Gen 2 (with display function, support power-in [20V and >45W]), 1x ethernet (RJ-45), 1x DisplayPort							Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available			
A 1'	* Depending on many f			eed may	be lower than theor	etical speed	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
Audio support WLAN	Realtek ALC233VB / Some: 11ac wireless	s, M.2 Car	d, Realtek RTL8		(dual band),						
	Some: 11ac wireles	s, M.2 Cai	combo adapter, 1 rd, Realtek RTL8 combo adapter, 2	822CE	(dual band),		Environment	ENERGY STAR® 7.1 TUV ultra low noise			ca), ErP Lot 3, TCO 8.0, EEE, REACH
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Car tooth 5.0 c	d, Intel Wireless ombo adapter, 1	-AC 946 x1	,		MIL-SPEC test				re, Low Temperature, Shock, Solar Radiation)
		tooth 5.0 c	ombo adapter, 2	x2			Accessories	For compatible acces			
D		cooth 5.0 c	ombo adapter, li	ntel vPro	tèchnology supp	port, 2x2					
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Inte					on LAN®					
Note: The specifica	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			
		Threads	Base/Max(GHz)		(Up to)	Graphics	Security features	Security slot (in rear for optional Mary Source cohle) Boot sequence control Read without keyboard and make the control of t			
	Celeron 4205U Core i3-8145U	2/2	1.8G 2.1G / 3.9G	2 MB 4 MB	DDR4-2133 DDR4-2400	UHD 610 UHD 620		 Kensington® MicroSaver® cable) Chassis intrusion switch Boot without keyboard and mo Individual USB port disableme 			
			,			UHD 620		Power-on password			
Memory	4GB / DDR4-2666* / * System automatica					ory controlle		Administrator passwordHard 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 y H10 with Solid Sot support Celero	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	one for		
Graphics	Intel UHD Graphics DisplayPort™, one U							Four M.2 slots: two for M.2 SSD (one PCIe 3.0×4 and one PCIe 3.0×2), one f WLAN, and one for WWAN			
	displays;	30 3.1 Typ	be-C Genz with C	пѕріау п	unction, up to 2 ii	паерепает		Dimensions (WxDxH) Weight (Appr	ox.)		
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" 1.58 lb (0.72 vary by cor			
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 75m Some: DIN rail mount bracket kit	ım		
. , ,	* 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	> 45W]), 1X etnei 12, 1x USB 3.1 T\	rnet (RJ /pe-C G	-45). TX DISDIAVE	y function,		Some: 65 watts AC/DC adapter (wide temperature), autosensing, 889 for Machine Type 11AS)			
	* Depending on many f	factors, actu	al data transfer spe	ed may	be lower than theor	etical speed	Limited warranty				
Audio support	Realtek ALC233VB /	/ internal s	peaker (1watt)					Some: 3-year, limited onsite service / service upgrades available			
WLAN	Some: 11ac wireles	tooth 5.0 c s, M.2 Cai	ombo 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)			
	Some: 11ac wireles: Wi-Fi + Bluet		d, Intel Wireless ombo adapter, 1		2 (dual band),		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	ombo adapter, 2	x2	, , , , , , , , , , , , , , , , , , , ,		MIL-SPEC test	MIL-STD-810H (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation)			
	Some: 11ac wireles				0 (dual band), technology sup	nort 2v2	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Bluetooth	Some: Bluetooth 5.0	O wireless.	integrated in Wi-	-Fi + BT	combo adapter						
Ethernet	With Celeron: Gigab With Core i3: Two g	oit etherne	t, Realtek RTL81	11K, 1x	: RJ-45, Wake on	LAN® N, 2x RJ-45					
Note: The enecified	ations above may not be	o ovoiloblo	in all vanions				•	Longue	. July 2019		













ThinkCentre M910 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	n®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in rear for optional Power-on password			
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			 Kensington® MicroSaver® cable) Padlock loop Administrator password Hard disk password 			
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Smart USB protection, allows keyboard/ Boot sequence control 			
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 mouse only, blocks all storage devices Optional cable lock to physically lock 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 (SS State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" IVMe, P(Cle 3.0 x 4, 32Gb	/s		 Toolless cover, disk, optical, graphic card removal Optional dust filter Bay 1: Slim external ODD bay 			
Optical	Some: Intel Optan Some: DVD-ROM Some: DVD Burne	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* 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)*			
Onboard SATA	Four onboard SATA available via specia	A 6`.0Gb/s al bid mod	connectors, RAI del)	ID 0/1 su	pport (RAID pres	et only					
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 PCle x16 (x4 signal) slo optional rear 2x USB2.0 / parallel / 2nd serial / cable lock / Wi-Fi antenna occupies one expansion slot Optional system floor stand for vertical orientation			
	Max resolution: 409 Some: NVIDIA Ge	96x2304 ((DP)@60Hz;204 F 730 Direct Y 13	18X1536	(VGA)@50HZ PCIa 2 0 v8 adant	or	Floor Stand				
	two Display			z, 200, i	Ole 2.0 x0 adapt	CI,	Power supply	Some: 180 watts, autosensing, 85% PSU			
Monitor cable		tion: 3840	x2160 (DisplayP	ort)@60 k), DP to	Hz; dual DP, or DP to	HDMI 1.4	. ener cappiy	Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	Intel Q270 Chipse	et									
Front ports*	Four USB 3.1 Gen bid), microphone (3				en 2 (only availabl	e via special	Some: 1-year or 3-year, limited onsite service / service upgrades available				
Rear audio porte:	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	eríal (9-p ne VGA, n some i	two DisplayPort, models	serial (9-pin), optional two	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64 listed) preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processes) Preloaded applications (only some listed) Microsoft Office preloaded; purchase a product key to activate only for Window 10			
IEEE 1394*	None * Depending on many					retical speed		some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Lenovo Companion - Only for Window 7 Lenovo Companion - Only for Window 7 Lenovo Solution Center			
Audio support	High Definition (HD	D) Audio, I	Realtek ALC662	/ optiona	al internal speaker	r (1.5 watt)	-	 Lenovo ThinkVantage Tools 			
WLAN ¹³	Some: 11ac wirele	uetooth 4. ess, M.2 (1 combo adaptei	r, 1x1 Atheros	,	,,		 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,			
		uetooth 4.	1 combo adapter	r, 2x2	•			TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com			
Disease of The	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 8265, Wi-Fi + Bluetooth 4.1 combo adapter, Intel vPro technology support, 2x2 Some: Bluetooth 4.1 wireless, integrated in Wi-Fi + BT combo adapter									
Bluetooth™ Ethernet Modem	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 Modu	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

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) Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Soot without keyboard and mouse			
	Processor Cores / Threads Base/Max(GHz) Cache Memory Support Integrated (Up to) Graphics					
	Core i5-6500T 4/4 2.5G/3.1G 6 MB DDR4-2133 HD 530		Power-on password Power-on password Individual USB port disablement			
	Core i7-6700T 4 / 8 2.8G / 3.6G 8 MB DDR4-2133 HD 530		Chassis intrusion switch			
	Core i5-7500T 4 / 4 2.7G / 3.3G 6 MB DDR4-2400 HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i5-7600T 4 / 4 2.8G / 3.7G 6 MB DDR4-2400 HD 630		Some: Lenovo Traditional Keyboard (USB connector), black			
	Core i7-7700T 4 / 8 2.9G / 3.8G 8 MB DDR4-2400 HD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black			
Memory	32GB max, DDR4-2400*, two 260-pin SO-DIMM sockets, non-ECC, dual-channel capable * System automatically clocks down for the processors with lower memory controller	Mechanical	Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Tiny (1L), black color; metal case			
Storage	Some: Hard Drive / SATA 6.0Gb/s, 2.5", 5400 rpm or 7200 rpm, APS Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Some: M.2 Solid State Drive (SSD) / PCle NVMe, PCle 3.0 x 4, 32Gb/s Some: Intel Optane™ Memory (models with 7th gen Core processor), M.2		 Toolless chassis open Toolless HDD, SSD, memory removal Optional toolless chassis screw Optional dust filter 			
Optical	Some: DVD-ROM, slim (9.0mm), via USB external ODD box		Dimensions (WxDxH) Weight (Approx.)			
O I I O ATA	Some: DVD Burner (DVD±RW), slim (9.0mm), via USB external ODD box		M910 Tiny only 7.05" X 7.20" X 1.36" 2.91 lb (1.32 kg),			
Onboard SATA Media reader	One onboard SATA 6.0Gb/s connector None		179mm X 182.9mm X 34.5mm vary by config			
Graphics	Intel HD Graphics 510/530/610/630 in processor, uses main memory, DirectX [®] 12, two DisplayPort™, one optional video port (HDMI, VGA, 3rd DP, or USB 3.1 Type-C		With VESA mount & 7.42" X 7.30" X 2.48" 3.66 lb (1.66 kg), ODD box 188.4mm X 185.38mm X 63mm vary by config			
	with DisplayPort Alternate Mode), up to 3 independent displays; Max resolution: 4096x2304 (DP)@ 60Hz; 4096x2304 (Type-C)@ 60Hz;		With VESA mount & 7.42" X 7.30" X 2.62" 3.66 lb (1.66 kg), l/O box 188.4mm X 185.38mm X 66.6mm vary by config			
	4096x2160 (HDMI)@24Hz: 1920x1200 (VGA)@60Hz	VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm			
Monitor cable	Optional DP to VGA, DP to DVI-D (single link), DP to dual DP, or DP to HDMI 1.4	Floor Stand	Optional system floor stand for vertical orientation			
Chipset	Intel Q270 Chipset	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)			
Front ports*	Two USB 3.1 Gen1 (one is Always On and fast charge), one microphone (3.5mm),		90 watts AC/DC adapter, autosensing, 88% PSU (only for models with I/O box)			
Rear ports*	one headphone / microphone combo jack (3.5mm) Four USB 3.1 Gen1 (optional external optical box or external I/O box occupies one or two specific USB 3.1 Gen1 on some models), ethernet (RJ-45), two DisplayPort,	Limited warranty³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available				
I/O box*	two optional ports (Port 1 for VGA / 3rd DP / HDMI / serial / USB 3.1 Type-C Gen 1 (with DisplayPort Alternate Mode), Port 2 for serial) Optional external I/O box, extends two USB 2.0, two USB 3.1 Gen1, and one serial on rear, two USB 2.0 on front, via USB cable (occupy two specific USB 3.1 Gen1 of Tiny) * Depending on many factors, actual data transfer speed may be lower than theoretical speed	Preload	Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processor) Some: Windows 10 Pro 64-bit • Microsoft Office preloaded; purchase a product key to activate - Only for Window 10 • Lenovo Companion			
Audio support	High Definition (HD) Audio, Realtek ALC294 / optional internal speaker (1w or 2w)		Some: Windows 10 Home 64-bit • Intel Unite download link			
WLAN ¹³	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band),		(vPro models only) - Only for Window 7 ■ Lenovo Solution Center ■ Lenovo 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 Adobe® Reader®			
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		 Cyberlink PowerDVD Create (DVD±RW) 			
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,	Continuo mara a sat	Intel Unite (vPro models only) ENERGY OTAR® 0.4 EREATIVE Order vision (Alextic 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™ 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	5. 20 1001	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	,			

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













ThinkCentre M910 Tower Platform Specifications

			® 0/711 O				l . .	0: 1:: :: : : : : : : : : : : : : : : :			
Processor	Intel® Celeron®, Intel Pentium®, or 6/7th Generation Intel Core™ i3 / i5 / i7 Processor						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	Coodiny omp	* 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/ 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 • Boot without keyboard and mouse			
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 			
Oto vo vo	* 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	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 Optional carry handle, dust filter Bay 1: Slim external ODD bay Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk) 			
Media reader	(RAID preset only a Optional 7-in-1 me			odel)							
Graphics	Intel HD Graphics			ecor He	es main memory	DirectY® 12					
Graphics	one VGA, two Disp	olayPort™.	supports 3 inde	pendent	displavs, works a	long with					
	discrete graphics to	o support	more displays;			Ü					
	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), PCle 3.0 x16*			
	Some: AMD Rade		3 50 , DirectX 11, 2 75 watts, occup					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*			
			le 3.0 x16 adapt 0 watts, occupie		VI-D, one HDMI,			M.2 card slots: Two (one for WLAN, one for SSD/Optane)			
					096x2160 (HDMI)	@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	ie-out (3.	ommi, microphoi	ie-iii (3.5)(111111)			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)	1	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	Atheros	QCA9377A (dual	band),		Lenovo Think Vantage Tools Create Recovery Media			
	Some: 11ac wirele	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 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,						 Adobe® Reader® 			
								 Cyberlink PowerDVD Create (DVD±RW) 			
			1 combo adapter		2.000 / 10 0 100,		Environment	,			
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,						LIMIONNE	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,			
	Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,				aloss-ΔC 8265			TUV low noise verified (on some models)			
	Wi-Fi + Blu	uetooth 4.	1 combo adapter	, Intel vP	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	m®. or 6/7th Gene	eration In	ntel Core™ i3 / i5 /	' i7 Processor	Ethernet	Gigabit	ethernet. Inte	el Ethernet Connection I219-LM(Jack	ksonville). Wake on LAN®
	,	Cores /	Frequency		Memory Support		Manageability			nt Technology 11.0 (Intel AMT 11.0);	100
	Processor Core i5-6500T		Base/Max(GHz) 2.5G / 3.1G	Cache 6 MB	(Up to) DDR4-2133	Graphics HD 530	Manageability	Intel vPr	o technology o	n some models (require choosing a vPro- function through wireless connection)	support Wi-Fi
	Core i7-6700T	4/4	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Security chip	TPM (Trusted Platform Module) 2.0*, TCG Certified			
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2100	HD 630				2 for the models with Win10 DG Win7 32 0	OS
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630	Security features	• Secu	rity slot (in rea	ar for optional • Hard disk p	
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630				Saver® cable) Boot seque	
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530					ut keyboard and mouse JSB port disablement
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530			r-on passwor		
	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 connector), blac	ck .
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630				itional Keyboard (USB connector), bl ope Wireless Keyboard (2.4GHz via	
Memory	32GB max, DDR4	-2400* tv	0 260-nin SO-DI	MM sock	ets non-FCC		Mouse			ope Mouse (USB connector), black	OSB receiver), black
Wichiory	dual-channel capa	ble .	•					Some:	Lenovo Calli	ope Wireless Mouse (2.4GHz via US	BB receiver), black
	* System automati	ically clocl	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	e Drive (S	SD)* / SATA 6.00	ab/s, 2.5"	 					D, memory removal	
	(* 2.5" HDD/SSD a Some: M.2 SSD (v 4 32Gh/e			nai toolless c nal dust filter	hassis screw	
	RAID 0/1	support (F	AID preset only	available	via special bid m	odel)		- Optio	nar adot mitor		
.	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	xternal O n), via US	SB external ODD	box		M910 I	iny 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
Onboard SATA Media reader	One onboard SATA None	rd SATA 6.0Gb/s connector						With VI ODD b	ESA mount & ox	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config
Graphics	Intel HD Graphics two DisplayPort™,	s 510/530 one optio	/610/630 in proce nal video port (H	essor, us DMI. VG	es main memory, A. 3rd DP. or USE	DirectX [®] 12, 3 3.1 Type-C			ESA mount &		3.66 lb (1.66 kg),
	with DisplayPort A	Iternate M	e Mode), up to 3 independent displays;	ternate Mode), up to 3 independent displays;		I/O box 188.4mm X 185.38mm X 66.6mm vary by config					
		96x2160	(HDMI)@24Hz; 1	920x120	0 (VGA) @60Hz		VESA mount Floor Stand		Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation		
	Some: AMD Rade	eon™ RX 4 sienlavPort	460 , DirectX 12, (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	, αριο τ support ι	up to 6 independe	nt displays;	Limited warranty	nty³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available			des available
		ıtion: 5120)x2880 @60Hz (ι	up to 2 m	ini DisplayPort);						
Monitor cable	Optional DP to VG	4096 IA, DP to I	Sx2160 @60Hz (i DVI-D, DP to dua	up to 4 m I DP, min	nini DisplayPort) ii DP to DP, or DP	to HDMI 1.4	Preload	Some: Windows® 7 Professional 32/64 Preloaded applications (only so preinstalled through downgrade listed)			lications (only some
Chipset	Intel Q270 Chipse	et							rights in Wir	ndows 10 Pro 64-bit Microsoft Off	ice 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 purchase a p	roduct key to activate
	one headphone / r	microphon	e combo jack (3.	.5mm)				Some:	processor) Windows 10	Pro 64-bit - Only for Windo	
Rear ports*	Four USB 3.1 Gen									Home 64-bit • Intel Unite do	
	USB 3.1 Gen1), effor the models with	n BX 460	ี่ graphics): Port 1	for IVGA	/O optional ports (_/ 3rd DP / HDMI	/ serial /				(vPro models	s only)
	USB 3.1 Type-C G	en 1 (with	i DisplayPort Alte	ernate Mo	ode)]; Port 2 for [s	erial]				- Only for Wind	ow 7
I/O box*	Optional external I	I/O box, ex	tends two USB 2	2.0, two l	JSB 3.1 Gen1, ar	nd one serial				Lenovo SolutLenovo Think	ion Center
	on rear, two USB 2 * Depending on man)			Create Recovered to the control of the control	
Audio cupport	High Definition (HI			, ,			-			 Adobe® Read 	der [®]
Audio support WLAN ¹³		, ,				,	-			 Cyberlink Por (DVD±RW) 	werDVD Create
WLAIN	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1										Pro models only)
	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,				band),	Environment			, EPEAT™ Gold rating (North Americ	ca),	
							ErP Lot 3, GREENGUARD TUV low noise verified (on				
						MIL-SPEC test	MIL-ST	D-810G milita	ary certification (Low Pressure [Altitu	idel. High Temperature.	
			zard, intel Dual E 2 combo adaptel		51522-AC 0∠02,		5. 25 1551	Low Ter	mperature, Te	emperature Shock, Humidity, Sand ar	nd Dust, Vibration, Shock,
	Some: 11ac wirel	ess, M.2 (Card, Intel Dual E	and Wire	eless-AC 8265,			Fungus	, Solar Radia	tion)	
Divista sti Tu	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, Intel vPro technology support, 2x2 Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter				Accessories For compatible accessories, please go to http://www		ssories, please go to http://www.len	novoquickpick.com			
Bluetooth™	* Hardware suppo										
	riaidwaie suppo	1.0 01 4.2	, but willio 1100	and call	ioi oilly supports	D1 7.1					





















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, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Optical	* 128GB SSD M.2 (2: Some: Intel Optane ^T Some: DVD-ROM, S Some: DVD Burner	242) PCI Memory SATA 1.5€	e NVMe only sup / (not support Ce ab/s Drive, slim (ports PC eleron / P 9.0mm)	Cle 3.0 x 2, 16Gb/ Pentium Processo	's	Mechanical	 SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.23 lb (6 kg), weight may vary by configuration Toolless cover, disk, optical, extension card removal 		
Onboard SATA	Four onboard SATA 6 available via special b	6.0Gb/s co	onnectors, RAID			only		Optional dust filter Bay 1: Slim external ODD bay		
Media reader	Optional 7-in-1 media		,					Bay 2: 3.5", 1" high, internal, HDD/SSD		
Graphics	Intel UHD Graphics one VGA, two Display discrete graphics to s Max resolution: 4096: Some: NVIDIA Gefor two DisplayPo	yPort™, su support m x2304 (Di rce® GT 7 ort, 35 wa	upports 3 indepe ore displays; P)@60Hz; 2048; ′30 , DirectX 12, 2	ndent dis 1536 (Ve 2GB, PC	splays, works aloi GA)@50Hz le 2.0 x16 adapte	ng with	Floor Stand	Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane) Optional system floor stand for vertical orientation		
Monitor cable	Optional DP to VGA of Display with intel inte	dongle, D	P to DVI-D dong	e, DP to	dual DP dongle (for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 260 watts, autosensing, 85% PSU (only qualifylia via special bid)		
Chipset	Intel Q370 Chipset						I the transfer of the second	Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Front ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x USB 3.1 Type-C Gen1 (15W charging), 1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)							Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available		
Front ports* (Opt.) Optional: 1x media reader Rear ports* (Std.) 4x USB 3.1 Gen1, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,							Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
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						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	Some: Bluetooth 4.2	2/5.0 wireless, inte	grated in Wi-Fi + B	Combo adapter
1 10000001	Processor	Cores /	Frequency	Cache	Memory Support		Ethernet	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			
		Threads	Base/Max(GHz)		(Up to)	Graphics	Ethernet (Opt.)				rnet, 4x RJ-45, PCle x4
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Manageability	Intel Active Manager Intel vPro technology	ment Technology 1	2 (Intel AMT 12);	y Pro-support Wi-Fi
	Celeron G4930T Pentium Gold G5400T	2/2	3.0G 3.1G	2 MB 4 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 610		adapter to enable vP	ro function through	h wireless connection	on)
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400 DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TO	CG Certified		,
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		 Security slot (in real 	 Security slot (in rear for optional Boot sequence control 		
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610		Kensington® Micro		 Boot without key Individual USB; 	/board and mouse
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Chassis intrusion sPower-on passwor			ection, allows keyboard/
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		 Administrator pass 			cks all storage devices
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		 Hard disk passwor 	rd		
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradi	itional Keyboard (l	JSB connector), bla	CK
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callie Some: Lenovo Callie	ope Wireless Keyt	oard (2.4GHz via C connector) black	JSB 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	r; metal case		
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		 Toolless chassis or 	pen (need optiona		crew)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		Toolless HDD, SSE Ontional dust filter		ıl	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		 Optional dust filter one 2.5" hav for HDF 		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					rd are mutually exclusive
Memory	32GB max, DDR4-266	66*. two 2	260-pin SO-DIMI	VI socket	s. dual-channel	capable	1		Dimension	ns (WxDxH)	Weight (Approx.)
Storage	* System automaticall Some: Hard Drive / S	y clocks o	down for the pro	cessors	with lower memo		-	Tiny only	7.05" X 7.	20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config
Ciorage	Some: Solid State Dr Some: M.2 SSD / PC * 128GB SSD M.2 (22	rive (SSD Ie NVMe) / SATA 6.0Gb/s , PCIe 3.0 x 4*, 3	; 2.5" 32Gb/s	·	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	¹ Memory im (9.0mr	(not support Ce n), via USB exte	leron / P rnal ODI	entium Processo D box	or), M.2	VESA mount Floor Stand			and 100mm	
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector	VIA OOD	CATOMIC ODD L	,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- Some: 1-year or 3-			
Monitor cable	Optional DP to VGA d	longle, DF		e, DP to	dual DP dongle		Preload	Some: Windows® 1	Preloaded operating system Some: Windows® 10 Pro 64-bit		
Chipset	Intel Q370 Chipset	g. a. o a g. o					-	Some: Windows 10 Preloaded applicati		istad)	
	* one USB 3.1 Gen1 (A						-	 Lenovo Vantage 	` •	istea)	
Daar marta (Otal)	one microphone (3.5n							 Microsoft Office pr purchase a produce 			
	* 2x USB 3.1 Gen2, 2x * Two optional ports (m							 Cyberlink PowerD\ 	VD (only for mode	Is with DVD / DVD±	RW)
ricai porto (Opt.)	2nd HDMI / serial / US	SB 3.1 Ty	pe-C Gen 1 with	DP fund	ction); Port 2 for s	serial;		 Cyberlink Power2GO (only for models with DVD±RW) 			
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9)-pin) via		LinkedInIntel Unite (Machir	ne Type 10V8 mod	lele only)	
	PCle x1, 1x Thunderb								71	• • • • • • • • • • • • • • • • • • • •) [*D] at 2 TCO
Audio or moset	* Depending on many fac					elicai speed	Environment	ENERGY STAR® 7.0 TUV ultra low noise	verified (coming s	oon, on some mode	ls). RoHS-compliant
Audio support	Realtek ALC233VB2			,			MIL-SPEC test		<u> </u>		<u> </u>
WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),						WIL OF LO ICSI		MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock Fungus, Solar Badiation)		
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2	,		Accessories	For compatible acces	<u> </u>	to http://smartfind	l.lenovo.com
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,										
			ombo adapter, 2		733-AO 0200,						
	Some: 11ac wireless	, M.2 Car		-AC 956		port, 2x2					
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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 PCle x4 (available on 09/30/2018),		
	Processor Cores / Frequency Cache Memory Support Integra				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		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	or DVD Bu	rner (DVD±RW)	, SATA 1	.5Gb/s Drive, slir	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 I	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	es 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 (Special bio	l only), D	., irectX 12, 6GB, F	PCIe 3.0		Slot 3: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16 (x4 signal)		
	x16 adapter,	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)@	60Hz		M.2 card slots: Two (one for WLAN, one for SSD/Optane)		
Monitor Cable	5120x3200 (D Optional DP to VGA (1000H	Z P to DVI_D donal	a DP to	dual DP donale	(for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU		
	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 ala was at .			
Front ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x USB 3.1 Type-C Gen1 (15W charging),						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 Rear ports* (Std.) 4x USB 3.1 Gen1, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,						,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
	1 4x USB 3.1 Gen1, 1x 1x line-out (3.5mm)) <i>Optional:</i> 2x USB 2.0						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		
ποαι ροπο (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 piri), 2	, O, _ pc	(noyboard/iii	5 3 5 5 7 , 17			1			



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pen	tium®. or 8	th / 9th Gen Intel 0	Core™ i3	/ i5 / i7 / i9 Process	or		4x Mini DisplayPort, up	to 4 independent displays, works	s along with
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	1	onboard DP and HDMI t	to support up to 6 independent di <2880@60Hz ((up to 2 Mini Displ	splays;
		Threads	Base/Max(GHz)		(Up to)	Graphics	4	4096)	<2160@60Hz ((up to 4 Mini Displ	avPort)
	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 with intel integrated graphics), or	to DVI-D dongle, DP to dual DP o	dongle (for Collage Display
	Celeron G4930	2/2	3.2G 3.2G	2 MB	DDR4-2400 DDR4-2400	UHD 610	Chipset	Intel Q370 Chipset	Di to fibivii 1.4 dongle, iviilii bi	10 DI
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	1∟	<u> </u>		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Front ports (Std.)*	one USB 3.1 Gen1 (Always On a one microphone (3.5mm), one he	and fast charge), one USB 3.1 Ty eadphone / microphone combo is	pe-C Gen 1, ack (3 5mm)
	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 G	ien1, 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 excl	lusive with PCIe card): Port 1 for	VGA / 2nd DP / 2nd HDMI /
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	serial / USB 3.1 Type-C Gen 1 w Optional ports via PCle card: 2x	utn DP function); Port 2 for serial; USB 3.1 Gen1 via PCIe x1. 4x s	erial (9-pin) via PCle x1. 1x
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo USB3.1 To	ype-C Gen 2 / DP) via PCIe x4	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	1		tual data transfer speed may be	· · · · · · · · · · · · · · · · · · ·
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / optional ir	nternal speaker (1.5 watt or 2 wat	it)
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN		2 Card, Realtek RTL8821CE (du	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT 4.2, M.	.2 Card, Realtek RTL8822BE (du .2 Card, Intel Dual Band Wireless	ial band), 2x2
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	1		.2 Card, Intel Dual Band Wireless	
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT 5.0, M.	.2 Card, Intel Wireless-AC 9560 (
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Bluetooth	Intel vPro technology su	upport, 2x2 ess, integrated in Wi-Fi + BT coml	ho adanter
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet C	Connection I219-LM(Jacksonville)), Wakė on LAN®
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Ad	apter I350-T4, gigabit ethernet, 4	x RJ-45, PCIe x4
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Techno		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		adapter to enable vPro function t	nodels (require choosing a vPro-s	support Wi-Fi
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified		
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features	Security slot (in rear for optional		
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610]	Kensington® MicroSaver® cable • Chassis intrusion switch	Boot without keybIndividual USB po	ooard and mouse
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610]	Power-on password	 Smart USB prote 	ction, allows keyboard/
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		 Administrator password 	mouse only, block	s all storage devices
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		Hard disk password		
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610	Keyboard	Some: Lenovo Calliope Keybox Some: Lenovo Traditional Keyb	ard (USB connector), black	
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630	1	Some: Lenovo Calliope Wireles	ss Keyboard (2.4GHz via USB re	ceiver), black
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse	(USB connector), black	,,
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	1	Some: Lenovo Fingerprint Mou	ise (USB connector), Windows H ss Mouse (2.4GHz via USB recei	lello support, black iver), black
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Machaniaal		,	iver), 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 of	ptional toolless chassis screw)	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	4	 Toolless HDD, SSD, memory re 		
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	4	 Optional dust filter one 2.5" bay for HDD/SSD, one I 	PCIa 2 0 v8 slat (low profile) thre	oo 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/SSE		
	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	Tiny only	7.05" X 7.20" X 1.36"	Weight (Approx.)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	4	Tiny only	9mm X 182.9mm X 34.5mm	2.91 lb (1.32 kg), 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>		.4mm X 185.38mm X 63mm	vary by config
Memory	32GB max, DDR4-2666* * System automatically c	locks down	for the processors	s with low	er memory control	ler	VESA mount Floor Stand	Optional VESA mount bracket kit Optional system floor stand for v	t, supports VESA 75mm and 100 ertical orientation	mm
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, autos		
	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		ot service / service upgrades ava ed onsite service / service upgra	
	* 128GB SSD M 2 (2242) PCIe NVI	vie only supports F	CIE 3 0 1	(2 16Gh/s		Preload	Some: Windows® 10 Pro 64-b		
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 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™ S TUV ultra low noise verified (com	Silver rating (North America), ErP	
Graphics	Intel HD Graphics 610/6	30 in proc	essor, uses main n	nemory, [DirectX® 12, one Di	splayPort™,	MIL CDEC toot			<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 certificat Low Temperature, Temperature S Solar Radiation)	וסוז (בסא יירפssure [אוזוזעמפן, High Shock, Humidity, Sand and Dust,	Vibration, Shock, Fungus,
	Max resolution:c4096x23 4096x2 Some: AMD Radeon™	216Ò (ońbo	ard HDMI)@24Hz	. 2048x1	536 (VGA)@50Hz		Accessories	· · · · · · · · · · · · · · · · · · ·	ase go to http://smartfind.lenove	o.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	eload Preloaded operating system			
Chipset	Intel Q270 Chipset		Windows® 10 IoT Enterprise SAC X64 (RS5)			
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 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.co				
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++	
Form factor			e when optional Tiny slots into
Commontible Time		clean cabling and effortle	
Compatible Tiny:	M53 Tiny, Chromet		r*, 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	agonal 76.06mm 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 (tr	ypical)	
Contrast ratio	1000:1 (typical)	,	
Pixel response time Color gamut	7ms 72%		
Anti-reflective	Anti-glare		-1
Preset resolutions		ontal, 178° (+/- 89°) vertic	al
Freserresolutions	640x350 @ 70Hz 640x480 @ 60Hz,	66Hz, 72Hz, 75Hz	
	720x400 @ 70Hz	70U- 75U-	
	800x600 @ 60Hz, 1024x768 @ 60Hz.		
	1152x864 @75Hz		
	1280x800 @ 60Hz 1280x1024 @ 60H		
	1366x768 @ 60Hz 1440x900 @ 60Hz		
	1600x1200 @ 60Hz		
	1680x1050 @ 60H	_	
Presets / user settings	1920x1080 @ 60H Presets: 25; user se		
On screen display		with digital user controls (8	
Control features		O mode / standalone mon sources) / Back button, Lef	itor mode, switches video /
	Brightness button,	Selection button / Menu bu	utton, Power button
Tiny-in-One Power On			ver button positioned on TIO y support, see compatible list)
Front ports	Two USB 3.0 or two	o USB 2.0 (when M73 or N	153 installed or USB 2.0
	connected via USB jack (3.5mm)	upstream port), one head	lphone / microphone combo
		e only available when a Ti	ny is istalled or a PC is
Side ports	connected via USB	upstream 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/
Internal Speaker	1.5 watt x1	ort 1.2), orny for confidenti	g to Tiny installed (optional)
Security			able lock (Kensington® lock
	offered by Tiny inst	optional Tiny with TIO 22 to alled (optional)	ogether, more security features
Mechanical	Dimensions	TIO 22 without stand	TIO 22 with stand
	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)	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			ience when optional Tiny slots into	1
Compatible Tiny:		ean cabling and effortle 00 / M700 / M600 / M7	ess setup 15 / M93/p* / M83 / M73* / M53 /	
	Chromebox Tiny	can't be turned on by	oressing power button of TIO	Ī
Denel			<u> </u>	F
Panel	Notes: In-Plane Sv	witching may refer to V	**, White LED backlight A, PLS, and IPS panels	Į
Viewable image size	21.5" (546.1mm) d	iagonal		1
Max view area (W x H) Bezel Width	Top / Side: 2mm, B	76.1mm x 267.8mm		E
Native resolution	1920x1080			i
Multi-touch		nulti-touch, supports W	/ake on Touch	l١
Aspect ratio Pixel pitch (mm)	16:9 0.24795mm			1
Dot/Pixel per Inch	102.4 dpi			1
Brightness	250 nits or cd/m ² (t	ypical)		١.
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms		1
Color gamut	72%	ar drive to 4ms, oms		
Anti-reflective	Anti-glare			
Viewing angle at 10:1 CI	R178° (+/- 89°) horiz	contal, 178° (+/- 89°) ve	ertical	
Preset resolutions	640x350 @ 70Hz	CCLI- 7011- 7511-		
	640x480 @ 60Hz, 720x400 @ 70Hz	0002, 7202, 7302		
	800x600 @ 60Hz,	72Hz, 75Hz		
	1024x768 @ 60Hz	, 70Hz, 75Hz		
	1152x864 @75Hz 1280x800 @ 60Hz			
	1280x1024 @ 60H			
	1366x768 @ 60Hz			
	1440x900 @ 60Hz			
	1600x1200 @ 60H 1680x1050 @ 60H			
	1920x1080 @ 60H			
Presets / user settings	Presets: 25; user s	ettings: 25		
On screen display		with digital user contro		
Control features	Ftont: Exit butto	n, Lett / Mode-Switchin ightness hutton Enter	g button (TIO / monitor mode), / Menu button, Power button	
		p button, Volume down		
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	
Side ports (TIO)	connected via USE		of Moo installed of GOD 2.0	
	Notes: The USB p	ort is only availáble wh	nen a Tiny is istalled or a PC is	
Cida parta (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 Internal Speaker	720p camera with a 2 watt x2	dual microphone for V	OIP, LED indicator	
Security		r attachment of ontion	al cable lock (Kensington® lock	1
		optional Tiny with TIO	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	
				1

	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°
	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
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	ThinkCentre Tiny-in-One 22 Gen	3 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) 24

Model	10LLPAR6++ / 10L	LPAT6++					
Form factor	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into the back of TIO 24, clean cabling and effortless setup						
Compatible Tiny:		•	y*, M83 Tiny, M73 Tiny*, or				
	M53 Tiny, Chromebox						
Panel	* Non-TIO models can't be turned on by pressing power button of TIO 24 TFT-LCD, In-Plane Switching (IPS), White LED backlight						
Viewable image size	23.8" (604.7mm) di	agonal	D backlight				
Max view area (W x H) Bezel Width	21.06" x 12.32" / 53 Top / Side: 2mm, B	35.0mm x 313.0mm ottom: 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
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	ThinkCentre Tiny-in-One 24 C	ompatible 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		nce 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 /			
		can't be turned on by pr	essing power button of TIO			
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	Re off fodeli			
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) 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		a a Timo is istallad as a DC 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	/ USB 2.0], DisplayPort), only for connecting to Tiny installed (optional) 1080p camera with dual microphone for VOIP, LED indicator					
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 /		Ŭ			

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	Mecha	nical		TIO without	t stand	TI	O with stand
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny TFT-LCD, In-Plane Switching technology**, White LED backlight **Notes: In-Plane Switching may refer to IPS, PLS, ADS, AHVA, and AA			Dimensions	614 0 4 72 00) v /12 1	6140 × 20	9.0 x 444.25 - 554.25
Panel				(W x D x H mm / inch)	614.0 x 73.89 / 24.17 x 2.91			9.0 x 444.25 - 554.25 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	0.82 lb	7.9	5 kg / 17.53 lb	
Bezel Width Native resolution	Top / Side: 2mm, Bottom: 23.3mm 2560x1440		ing features	Wall or desk moun meeting the VESA	FPMPMI® (10	extend ar 0mm moi	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 7		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		supply consumption	170 watts adapter, 37 watts typical, 57			watts stand	by / suspend
Color gamut Anti-glare	99% sÀGB Yes (25%)	Limited	d warranty	3-years , Product E Service (EMEA)	Exchange Serv	rice (US a	and EMEA)	or Customer Carry-In
	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical		-compliant	VESA DDC/CI, VE	SA DPMS-con	npliant		
Preset resolutions	640x350 @ 70Hz 640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz 800x600 @ 60Hz, 72Hz, 75Hz		omics ion standards nmental	ISO 9241-307, TU FCC Class B TCO 8.0, TCO Edd	ge 2.0, WEEE,	RoHS, E	ENERGY STAR® 7.0,	
	1024x768 @ 60Hz, 70Hz, 75Hz	Windo	ws certifications	EPEAT™ Silver rating, ULE Gold, TUV, VOC tions Windows 7 and Windows 10 certified				
	1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz	Ship g	roup	TIO 27 (Monitor), detachable stand, power adapter, power cord, referendent and driver CD				
	1280x1024 @ 60Hz, 72Hz, 75Hz	Accessories For compatible accessories, please go to http://smartfind.lenovo.com ThinkCentre Tiny-in-One 27 Compatible Matrix						ind.lenovo.com
	1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1600x1200 @ 60Hz, 70Hz, 75Hz							
	1680x1050 @ 60Hz	Model		P320 / P330 / M920			p Tiny,	Chromebox
	1920x1080 @ 60Hz 2560x1440 @ 60Hz			M910(x) / M710 / M9	00(x) / M700 /	1	3 Tiny	
Presets / user settings	Presets: 27; user settings: 25	-	TIO I	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	Ting	n on TIO and y together via + P on USB KB	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)	Ting	n on TIO and y 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	TIC	Power Button					
	combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream. DisplayPort(in), or HDMI(in) port							
Side ports (Tiny) Rear ports	Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream port, one power connector							
3-in-1 Cable	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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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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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









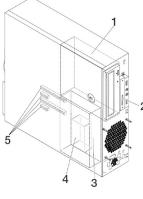




ThinkStation	P320	SFF	Platform	Specifications
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Intel AMT	Components	Specification						
Intel AMT	·	•						
"Kaby Lake" Xaon E3-1276 v6	'	Intel Active Manag	ement	Technolo ility on ot	gy 11 on her mode	Xeon models, ls		
Seon_E3-1270_V6		One Intel "Kabylak						
Nemory DIMM slots	Processor	Xeon E3-12/0 v6 Xeon E3-1245 v6 Xeon E3-1240 v6 Xeon E3-1230 v6 Xeon E3-1225 v6 Xeon E3-1220 v6 Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7500 Core i3-7300	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 2C 2C	i/3.8GHz/8 i/3.7GHz/8 i/3.7GHz/8 i/3.5GHz/8 i/3.3GHz/8 i/3.6GHz/8 i/3.5GHz/6 i/3.4GHz/6 i/3GHz/6M i/4GHz/4M	MB/72W/D MB/73W/D MB/72W/D MB/72W/D MB/73W/D B/72W/DD MB/65W/D MB/65W/D MB/65W/D B/65W/DD B/65W/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		
Xeon E3-1240 v5		"Skylake"						
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.		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	4C 4C 4C 4C 4C 4C	6/3.5GHz/8 6/3.4GHz/8 6/3.3GHz/8 6/3.4GHz/8 6/3.4GHz/8 6/3.2GHz/6 6/2.7GHz/6	MB/80W/D MB/80W/D MB/80W/D B/80W/DD MB/65W/D MB/65W/D MB/65W/D	DR4-2133 DR4-2133 DR4-2133 R4-2133 DR4-2133 DR4-2133 DR4-2133		
Memory type/capacity processor supports up to DDR4-2133. Core i7 and i5 processors cannot support ECC. 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 processor or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connector (2 DP, 1 VGA) on rear. Two PCI Express 3.0 x16 slots for graphics adapters. Up to two NVIDIA Quadro P1000. Supports the following NVIDIA graphic adapters: Adapter	Memory DIMM slots	4 DIMM slots, 2-ch	annel	(integrate	d memory	y controller in processor)		
Intel HD Graphics 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 connector (2 DP, 1 VGA) on rear. Two PCI Express 3.0 x16 slots for graphics adapters. Up to two NVIDIA Quadre P1000. Supports the following NVIDIA graphic adapters: Adapter	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						
Two PCI Express 3.0 x16 slots for graphics adapters. Up to two NVIDIA Quadre P1000. Supports the following NVIDIA graphic adapters: Adapter		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						
Discrete graphics NVS 310		Two PCI Express 3	3.0 x16				Jadro	
Discrete graphics NVS 315			Cores	Memory	Power	Connector		
NVS 510 192 2GB 33.4W 4xmini DP Quadro P400 256 2GB 30W 3xminiDP Quadro P600 384 2GB 40W 4xminiDP Quadro P1000 640 4GB 47W 4xminiDP Onboard drive controller Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support **RAID 5 needs three 2.5" SSD drives.* One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives Supporting disk drives Supporting disk drives 13.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCIe 256GB Opal/512GB Opal/1TB Opal, via PCIe 3.0 x4 adapter, up lo 2; or 16GB Intel Optane Memory, PCIe 3.0 x2 Max internal storage 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models Power supply Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec	Diameter annuality		_					
Quadro P400 256 2GB 30W 3xminiDP Quadro P600 384 2GB 40W 4xminiDP Quadro P1000 640 4GB 47W 4xminiDP Onboard drive controller Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support Prive Bays One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives 3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up ladapter 10 2; or 16GB Intel Optane Memory, PCle 3.0 x2 Max internal storage 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models Power supply 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec	Discrete graphics							
Quadro P600 384 2GB 40W 4xminiDP Quadro P1000 640 4GB 47W 4xminiDP Onboard drive controller Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support Prive Bays One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives 3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up dadpter Max internal storage 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD Media reader Power supply 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio			_					
Onboard drive controller Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support **RAID 5 needs three 2.5* SSD drives.* One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives 3.5* SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5* SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD. 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up adapter Max internal storage 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio								
Onboard drive controller Five onboard SATA 6.0Gb/s connectors for optical and disk drives plus one SATA connector for optional eSATA. RAID 0, 1, 5* support **RAID 5 needs three 2.5* SSD drives.* One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives 3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up adapter 10TB (2 x 4TB 3.5" HDDs + 1 x 2TB 2.5" SSD) plus two 1TB M.2 NVMe SSD Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models Power supply Climate Savers Computing Bronze, 80 PLUS Bronze qualified One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec			_					
One external 5.25" bay, one internal 3.5" bay (see right). Up to one 9mm optical + 2 x 3.5" disk drive bays + 1 x 2.5" disk drive bay + two M.2 NVMe SSD Supporting disk drives Supporting Bropal/S12GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal Dallo 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal Dallo 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal/2TB o		Five onboard SATA SATA connector fo	6.0Gl	o/s conne	ctors for o	optical and disk drives plus one)	
Supporting disk drives 2.5" SATA SSD (6Gbs) 256GB Opal/512GB/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up to 2; or 16GB Intel Optane Memory, PCle 3.0 x2	Drive Bays	One external 5.25" Up to one 9mm op	bay, c	ne intern	al 3.5" bay lisk drive i	y (see right). bays + 1 x 2.5" disk drive bay -	+ two	
Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models Power supply 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec	Supporting disk drives	3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, via PCle 3.0 x4 adapter, up						
Media reader 9-in-1 card reader. Optional 29-in-1 card reader on selected models Power supply 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec	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	
Power supply 210 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec		`						
Onboard Ethernet One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN HD Audio Realtek ALC662 codec		210 watts with vari	able s	peed fan,	autosens	ing,		
HD Audio Realtek ALC662 codec	Onboard Ethernet							
	TPM			liant				

	,
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

	.,
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





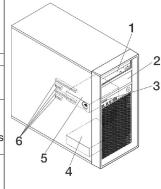






ThinkStation P320 Tower Platform Specifications						
Components	Specification		•			
Chipset	Intel C236 Chipset					
Intel AMT	Intel Active Manage Intel Standard Man	ement				
Processor	One Intel "Kaby La "Kaby Lake"					
	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6 Xeon E3-1245 v6 Xeon E3-1240 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Core i7-7700K Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7400 Core i3-7300 Core i3-7300 Core i3-7300	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4	;/3.8GHz/8 ;/3.8GHz/8 ;/3.7GHz/8 ;/3.7GHz/8 ;/3.5GHz/8 ;/3.3GHz/8 ;/3.3GHz/8 ;/3.6GHz/8 ;/3.5GHz/6 ;/3.5GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/4.6Hz/6 ;/4.6Hz/4	MB/72W/D MB/73W/D MB/73W/D MB/73W/D MB/72W/D MB/72W/D MB/91W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/51W/D	DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400	
	"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 4C	i/3.5GHz/8 i/3.4GHz/8 i/3.3GHz/8 i/3.4GHz/8 i/3.4GHz/8 i/3.2GHz/6 i/2.7GHz/6	BMB/80W/D BMB/80W/D BMB/80W/D BMB/80W/D BMB/65W/D BMB/65W/D BMB/65W/D BMB/65W/D	DR4-2133 DR4-2133 DR4-2133 R4-2133 DR4-2133 DR4-2133 DR4-2133	
Memory DIMM slots					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.					
	Two PCI Express 3.0 x16 slots for graphics adapters. Up to two Quadro P1000 on 250 watts models. Or up to two Quadro P2000, or up to one Quadro P4000 on 400 watts models. Supports the following NVIDIA graphics adapters:					
	Adapter	Cores		Power	Connector	
	NVS 310 NVS 315	48	1GB 1GB	19.5W 19.5W	2xDP 2xDVI-I SL/2xDP	-
Discrete graphics	NVS 510	192	2GB	33.4W	4xmini DP	-
	NVS 810	1024	4GB	68W	8xmini DP	
	Quadro P400	256	2GB	30W	3xminiDP	1
	Quadro P600	384	2GB	40W	4xminiDP	
	Quadro P1000	640	4GB	47W	4xminiDP	
	Quadro P2000	1024	5GB	75W	4xDP	
	Quadro P4000	1792	8GB	105W	4xDP	
Onboard drive controller	SATA connector for	option	nal eSATA	 RAID 0, 		is one
Drive Bays	Two external 5.25" bays, two internal 3.5" bays (see right). Up to one 9mm optical plus 4 x 3.5" disk drive bays plus two M.2 NVMe SSD					
Supporting disk drives	3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle 256GB Opal/512GB Opal/1TB Opal, PCle 3.0 x4, up to 2; or adapter 16GB Intel Optane Memory, PCle 3.0 x2					
Max internal storage	16TB (4 x 4TB 3.5'	' HDDs	s) plus 21	ГВ (2 x 1T	B) M.2 NVMe SSD	
Media reader	9-in-1 card reader. Optional 29-in-1 card reader on selected models					
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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	and 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

1	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)
	Bay 2	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
(,	Four PCIe slots (top-down):
		Slot 1: Half length, full height, PCIe 3.0 x16 (near CPU)
		Slot 2: Half length, full height, PCIe 3.0 x1
	6 -Slots	Slot 3: Half length, full height, PCIe 3.0 x16 (x4 elec)
		Slot 4: Half length, full height, PCIe 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 PCIe card can









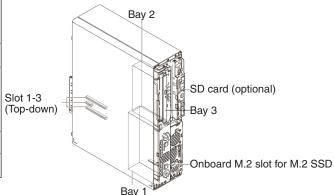


ThinkStation P330 SFF Platform Specifications

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						
Expansion slots	Three PCIe 3.0 slots as following:						
	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 PCIe 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	wake-on-Lan. Optional PCIe etnernet adapters are available			
Security features	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











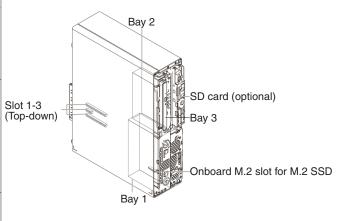


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

	P330 SFF Gen	1 2 (3001	and	4 50	02) 1	lation	iii Speci	IIICation
Components	Specification							
Form factor	8.4L mini-tower							
Dimensions	Height: 343.5 mm (13.5 in). Widt	th: 92	.5 mm	ı (3.6 in). Depth:	305.6 mm	(12 in)
Weight	Maximum configuration: 13.23 lb (6.0kg)							
	Supports one of the	following pro	ocess	or:				
	Xeon E-2278G	8C/16T/3.4	GHz/	16MB/	80W/DI	DR4-2666	(260W PS	U needed)
	Xeon E-2276G	6C/12T/3.8						,
	Xeon E-2274G	4C/8T/4.0C	Hz/8	MB/83	W/DDR	4-2666		
	Xeon E-2246G	6C/12T/3.6					6	
	Xeon E-2244G	4C/8T/3.8C						
	Xeon E-2236 Xeon E-2234	6C/12T/3.4 4C/8T/3.6G)	
	Xeon E-2226G	6C/6T/3.4C						
	Xeon E-2224G	4C/4T/3.5C						
	Xeon E-2224	4C/4T/3.4C						
Processor	Xeon E-2174G	4C/8T/3.8C						
1 10000001	Core i9-9900	8C/16T/3.1					6	
	Core i7-9700	8C/8T/3.0G						
	Core i7-8700	6C/12T/3.2					5	
	Core i5-9600 Core i5-9500	6C/6T/3.1G 6C/6T/3.0G						
	Core i5-9400	6C/6T/2.9G						
	Core i5-8500	6C/6T/3.0C						
	Core i3-9300	4C/4T/3.70	Hz/8	MB/62	W/DDR	4-2400		
	Core i3-9100	4C/4T/3.6C						
	Core i3-8300	4C/4T/3.7C						
	Core i3-8100	4C/4T/3.6C						
Chipset	Pentium Gold G5620	2C/4T/4.0C	a∏Z/4I	IVIB/54	VV/DDH	4-2400		
Memory Sockets	Intel C246 Chipset 4 DIMM sockets with	2 abannala						
Memory Types	8GB/16GB DDR4-26		CC or	1CR/9	9CB/16	CR DDR/	1-3666 LIDIN	M non-ECC
Memory Capacity	64B with 4 x 16GB, b						F-2000 ODIN	/IIVI HOH-LCC
Memory Protection	ECC on models with				VIIVI TIOTI	-LUU		
momory r rotoction	Three PCIe 3.0 slot			oory				
		`		to CD				
Expansion slots	Slot 1 PCIe 3.0 x16							
	Slot 2 PCIe 3.0 x1,					eu		
	Slot 3 PCIe 3.0 x16							
Processor graphics	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD Graphics 630 in Core i5 or i3 processors. Works along with discrete graphics to support multi-display, enables three rear display connectors (2 DP standard, 1 DP or HDMI optional)							
	Up to two PCIe 3.0 the following graphic	x16 slots for cs adapters:	discr	ete gra	aphics	adapter (Slot 1 and	3). Supports
Discrete graphics		res Memor	_	Power		nectors	Max qty	
card		56 2GB GDI		30W		miniDP	2	
		12 2GB GDI 40 4GB GDI		40W 47W		miniDP miniDP	2 2	
								RAID
Storage Controller	Storage Controller Onboard Intel RST S		Type Std	Inter SATA	6Gb/s		<u>k Type</u> or SSD	0/1
Clorage Controller	Onboard Intel RST F		Std		NVMe		Cle SSD	0/1
			_					·
		terface RPI FA 6Gb/s 7.2I			Offering 3/2TB/4	TR		<u>x Qty</u> 1
o. o .		TA 6Gb/s 7.21			OGB FIF			2
Storage Support		ΓA 6Gb/s	\neg		3/512GE			2
	Optane Memory PC				32GB		1, used wit	h HDD/SSD
	M.2 PCIe SSD PC	le NVMe		256GE	3/512GE	3/1TB		3
	Up to 3 bays with tw	o disk bays	and c	ne sli	m optic	al bay:		
		y 3.5" SATA			1	.,		
Storage bay		ATA bay (Op)				
		Slim ODD ba		,				
		SSD (1 onbo		l via P	Cle to N	/ 2 adant	er using Sk	ot 3)
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	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
1	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 PCIe 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:	

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			Components	Specification										
	Out the state of the super terms of the super state of the state of th		Chipset	Intel Q370 Chipset										
Form factor	Optional floor stand for vertical orientation. Optional tool-less chassis open. Optional dust filter		Memory	2 DIMM sockets. DDR4-2666. SoDIMM. Non-ECC										
				One PCIe slot via specific riser card:										
Dimensions				nm (7.2 in)	Expansion slots	PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card:								
Weight	Maximum confi			b (1.4kg)					PCIe 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter					
Supported TIO	Tiny-in-One 23 Tiny-in-One 22 Tiny-in-One 24	(MT:	10LK). 10LL).					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								Integrated Intel UHD Graphics 630. Works along with discrete graphics to support multi-display					
	Tiny-in-One24	Gen3	(MT: 10C	(Y).				graphics	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 Cores Threads Base Cache TDP Memory Processor								Quadro P1000 640 4GB GDDR5 47W 4x miniDP Integrated Intel SATA AHCI controller in chipset, 6Gbps SATA, one onboard					
	Number		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	Intel UHD Graphics 630	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	Intel UHD Graphics 630	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 Bidotooni	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	Intel UHD Graphics 630	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	Intel UHD Graphics 630	Optical	Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±R VESA mount is required None. Using USB adapter One onboard GbE port via integrated gigabit ethernet Intel i219LM, support Wake-on-LAN. Optional Intel i350-T4 for 4x GbE ports, using PCle slot Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Chassis intrusion switch. Optional Kensington lock Supports vPro on models with the following processors: Core i7-8700T, Coi i7-8700, Core i5-8600T, Core i5-8600, Core i5-8500T, Core i5-8500. vPro also requires Wireless-AC 9560 if Wi-Fi is needed					
	Core i3-9300	4	4	3.7GHz	8MB	62WDDR4-2400	Intel UHD	Media reader						
Processor	Core i3-9100T	4	4	3.1GHz	6MB	35WDDR4-2400	Graphics 630 Intel UHD Graphics 630	Network interfaces						
	Core i3-9100	4	4	3.6GHz	6MB	65WDDR4-2400	Intel UHD Graphics 630	Security features						
	Core i7-8700T	6	12	2.4GHz	12MB	35WDDR4-2666	Intel UHD Graphics 630	Intel vPro						
	Core i7-8700	6	12	3.2GHz	12MB	65WDDR4-2666	Intel UHD Graphics 630	Technology						
	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-ir 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

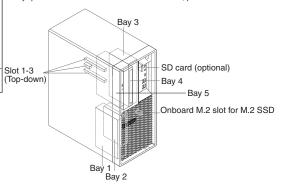
Components	Specification									
Machine Type	MT 30C5 for Transactional model and MT 30C6 for Relationship model. For configuration of all 30C5 EMEA and US models, please visit: http://psref.lenovo.com/Product/ThinkStation/ThinkStation_P330_Tower									
Form factor	18L Tower	,								
Dimensions	Height: 376 mm (14.	8 in). \	Width: 165 mr	n (6.5 i	n). Depth: 328 mm (12.9 in)					
Weight	,									
Processor	Maximum configuration: 23.4 lb (10.6kg) Up to one Intel Xeon E family processor, up to 95W, up to 6 cores at 3.8GHz, up to 12MB cache, up to DDR4-2666 memory speed. Or up to one 8th Intel Core family processor, i7, i5, or i3, up to 95W, up to 6 cores at 3.7GHz, up to 12MB cache, up to DDR4-2666 memory speed. Or up to one Intel Pentium Gold G5400 via Special Bids, 54W, 2 cores at 3.7GHz,									
Chipset	4MB cache, DDR4-2 Intel C246 Chipset	. +00 11	тетногу оросс							
Memory		R4-26	666. UDIMM. Entermixed	CC ar	d non-ECC are supported, b	out				
Memory capacity	Up to 64GB with 4x	16GB,	both ECC an	d non-	ECC					
Memory protection	ECC with ECC UDIN	им. С	ore i7 and i5 p	rocess	ors cannot support ECC UD	IMM				
	Three PCIe 3.0 slots	as fo	llowing:							
	Slot 1 PCIe 3.0 x16,	full he	eight, half lend	ıth, link	s to CPU					
Expansion slots	Slot 2 PCle 3.0 x1, f		<u> </u>							
			0		full height, half length, links to	o PCH				
Graphics - Processor graphics	connectors (2x DP, 1x HDMI. HDMI is optional) on rear									
	following graphics ac	dapter								
	Adapter Cores Memory Power Connectors Max qty Quadro P400 256 2GB GDDR5 30W 3x miniDP 2									
Graphics - Discrete	Quadro P400 256 2GB GDDR5 30W 3x miniDP 2 Quadro P620 512 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 1792 8GB GDDR5 105W 4x DP 1									
Storage controllers	Notes: Quadro P4000 and 2x Quadro P2000 need 400W PSU. Integrated Intel SATA AHCI/RAID controller in chipset, 6Gbps SATA, RAID 0/1/10/5. Four onboard SATA ports for max 4 SATA HDD/SSD/ODD									
Up to five bays with four disk bays plus one slim optical bay, supports the HDD plus 1x 2.5" SSD, or 4x 2.5" SSD										
	Bay 1 Primary disk bay, 3.5" or 2.5"									
	Bay 2 2.5" SATA bay, cannot be available when 2nd Quadro P2000 is used									
	Bay 3 Secondary disk bay, 3.5" or 2.5"									
Internal storage	Bay 4 5.25" Flex bay, supports one of the following:									
bay	Flex module for optional front eSATA/Thunderbolt/IEEE1394									
	Flex module for optional front eSAIA/ I nunderbolt/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				
					,					
Disks		Bay 5 9mm Slim ODD bay 3.5" HDD supports up to 4TB each, 6Gbps SATA, 7.2K								

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 <u>www.thinkworkstations.com/isv-certifications/</u>
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















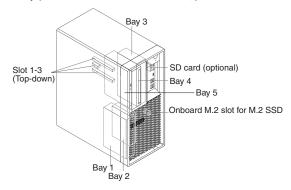
ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - I of II

Components	Specification				Specification					
Form factor	18L Tower			Components	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 11111 (12.3 111)	-	Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1					
Weight	Maximum configurati	1 0/		-	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 Xeon E-2274G	6C/12T/3.8GHz/12MB/80W/DDR4-2666 4C/8T/4.0GHz/8MB/83W/DDR4-2666			Optane Memory PCIe NVMe 32GB 1,					
	Xeon E-2246G	6C/12T/3.6GHz/12MB/80W/DDR4-2666			used with hdd/ssb					
	Xeon E-2244G	4C/8T/3.8GHz/8MB/71W/DDR4-2666			M.2 PCle SSD PCle 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			Bay 3 Secondary disk bay, 3.5" or 2.5"					
	Xeon E-2186G	6C/12T/3.8GHz/12MB/95W/DDR4-2666	400W PSU needed	0. 5	Bay 4 5.25" Flex bay, supports one of the following:					
Processor	Xeon E-2174G Pentium Gold G5620	4C/8T/3.8GHz/8MB/71W/DDR4-2666		Storage Bays	Flex module for optional front eSATA/Thunderbolt/IEEE1394					
	Core i9-9900	2C/4T/4.0GHz/4MB/54W/DDR4-2400 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	100VV 1 CO HOCGCG		• 3rd disk bay, 3.5" or 2.5", via 5.25" to 3.5" HDD Kit					
	Core i7-8700	6C/12T/3.2GHz/12MB/65W/DDR4-2666			Bay 5 9mm Slim ODD bay					
	Core i5-9600K	6C/6T/3.7GHz/9MB/95W/DDR4-2666	400W PSU needed		M.2 2x M.2 SSD (1 onboard. 1 via PCIe to M.2 adapter, using Slot 3)					
	Core i5-9600	6C/6T/3.1GHz/9MB/65W/DDR4-2666		Media reader	Optional SD card reader on most models					
	Core i5-9500	6C/6T/3.0GHz/9MB/65W/DDR4-2666		Network	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports					
	Core i5-9400				Wake-on-LAN. Optional PCIe ethernet adapters are available					
	Core i5-8500	6C/6T/3.0GHz/9MB/65W/DDR4-2666		interfaces WLAN + Bluetooth	One dedicated enhanted M.O. slot for entianal latel Wireless AC 0550, Ovo					
	Core i3-9300	ore i3-9300 4C/4T/3.7GHz/8MB/62W/DDR4-2400 ore i3-9100 4C/4T/3.6GHz/6MB/65W/DDR4-2400			2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps					
	Core i3-8300	4C/4T/3.7GHz/8MB/62W/DDR4-2400		Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant.					
	Core i3-8100	4C/4T/3.6GHz/6MB/65W/DDR4-2400			Optional chassis intrusion switch, e-loack, cable lock, Kensington lock, and					
Chipset	Intel C246 Chipset				pad lock					
Memory Sockets	4 DIMM sockets with 2	2 channels		Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed					
Memory Types		66 UDIMM ECC or 4GB/8GB/16GB DDR4	-2666 UDIMM non-ECC	1						
Memory Capacity		oth UDIMM ECC or UDIMM non-ECC		Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models					
Memory Protection		JDIMM ECC memeory		1	US models comes with 3-year limited onsite service with 9x5/NBD.					
,,	Three PCIe 3.0 slots	,		Base warranty	1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs					
Environ de la chata	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	Slot 2 PCIe 3.0 x1, fu	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					
	Slot 3 PCIe 3.0 x16 ((negotiable link width x4), full height, ha	alf length, links to PCH	Tront ports	Type-C. 1x Mic-in. 1x Combo jack					
		Graphics P630 in -G suffix Xeon proce		Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP.					
D	Graphics 630 in Core	e i7. i5. i3. or Pentium processors.		near 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.					
		16 slots for discrete graphics card (Slo	t 1 and 3). Supports the	module)	1x eSATA. 1x IEEE1394					
	following graphics ad	dapters:			Supports the following via cable:					
	Graphics	Memory Power Connector	Max Qty	Optional rear	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					
		2GB GDDR5 30W 3x miniDP	2	ports						
Discrete Graphics		2GB GDDR5 40W 4x miniDP	2							
Offering		4GB GDDR5 50W 4x miniDP 5GB GDDR5 75W 4x DP	2 2		Operating: 41 °F to 104 °F (10 °C to 35 °C)					
		5GB GDDR5 75W 4x DP 4x D	2	Temperature	Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)					
		GGB GDDR5X 180W DVI-D DL + 4x DP	1		Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)					
		BGB GDDR6 160W 3x DP, 1x VirtualLink								
		uadro P5000, or Quadro RTX 4000 needs 400W PS								
-	· · · · · · · · · · · · · · · · · · ·			-						

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

Dimensions		33I Tower											
Weight		33L Tower 165mm/6 5" W x 460mm/18 1" D x 440mm/17 3" H (with feet)						—II.					
Up to one 140W Intel Xeon W family processor:													
Processor Family Up to 18 Gores at 2.3 GHz Up to 4.0 GHz with 4 cores Up to 4.0 GHz with 4 cores Up to 24.75 MB cache Up to DDR4-2666 memory speed	vveigni												
Processor Family Up to 4.75 MB cache Up to DDR4-2666 memory speed													
Processor Sockets Chipset Intel C422 Chipset Memory Sockets Memory Types Memory Types Memory Types Memory Types Memory Types Memory Protection Siot 1 (CPU) Slot 2 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 1 (CPU) Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x4, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x4, full height, full length, 75W, double-width Slot 5 (CPU) PCIe 3.0 x4, full height, full length, 75W, double-width Slot 5 (PCH) PCIe 3.0 x4, full height, full length, 75W, double-width Slot 5 (PCH) PCIe 3.0 x4, full height, full length, 75W, double-width PCI, full height, full length, 25W Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 4 (CPU) 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 Slot 6 (PCH) Slot 5 (PCH) Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 6 (PCH) Slot 5 (PCH) Slot 6 (PCH) Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, open ended Slot 7 (PCIe 3.0 x4, full height, half length, 25W, op	Processor Family												
Processor Sockets 1x FCLGA2066 Intel C422 Chipset Intel C422 Chi											┈		
Chipset Memory Sockets 8 DIMM sockets with 4 channels DDR4-2666 RDIMM			3 mem	ory speed									
Memory Sockets S DIMM sockets with 4 channels											—lі		
Memory Types			ntel C422 Chipset										
Memory Capacity Memory Protection ECC									<u> </u>				
Memory Protection ECC Slot 1 (CPU Slot 2 (CPU Slot 2 (CPU Slot 2 (CPU Slot 2 (CPU Slot 3 (PCH PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH Slot 4 (CPU Slot 3 (PCH PCIe 3.0 x16, full height, half length, 25W, open ended Slot 4 (CPU Slot 4 (CPU Slot 5 Slot 6 (PCH PCIe 3.0 x16, full height, half length, 25W, open ended PCIe 3.0 x16, full height, half length, 25W Open ended PCIe 3.0 x4, full height, half length, 25W Open ended PCIe 3.0 x4, full height, half length, 25W Open ended Open end													
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Slot 2 (CPU) PCle 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCle 3.0 x4, full height, full length, 25W, open ended PCle 3.0 x4, full height, full length, 75W, double-width PCl, full height, full length, 25W Slot 6 (PCH) PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended PCle 3.0 x4, full height, half length, 25W Open ended Open ended PCle 3.0 x4, full height, half length, 25W Open ended Open ended Open ended PCle 3.0 x4, full height, half length, 25W Open ended Open en	Memory Protection		1 - 0 0		- 1 - I - 1 - 6		05144				\dashv_{f}		
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Slot 4 (CPU) Slot 5													
Slot 5 Slot 6 PCI, full height, full length, 25W PCIe 3.0 x4, full height, half length, 25W, open ended	Expansion slots												
Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended							n, 75VV,	aou	ibie-wiath				
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Quadro P400									SLI / NVlink				
Quadro P600 2GB GDDR5 45W 4xminiDP 2								-			- F		
Quadro P620								\dashv			┨╢		
Quadro P1000								\dashv			1		
Discrete Graphics Quadro P2000 5GB GDDR5 75W 4xDP 2 Quadro P4000 8GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5X 180W DVI-D DL+4xDP SLI 2 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 295W 4xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro RTX 8000 48GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 255W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP 1								\neg			1		
Offering			5GB	GDDR5]		
Quadro P6000 24GB GDDR5X 250W DVI-D DL+4xDP 1											- 1		
Quadro RTX 4000 8GB GDDR6 160W 3xDP, 1xVirtualLink 2 Quadro RTX 5000 16GB GDDR6 265W 4xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro RTX 8000 48GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP, 1xVirtualLink 1 Quadro GV100 Quadro GV100 32GB HBM2 250W 4xDP, 1xVirtualLink 1 Quadro GV100 Q	Offering								SLI		↓ `		
Quadro RTX 5000										-			
Quadro RTX 6000													
Quadro RTX 8000													
Quadro GP100		Quadro RTX 8000 48GB GDDR6 295W 4xDP, 1xVirtualLink 1											
Quadro GV100 32GB HBM2 250W 4xDP 1		Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2											
Storage Controller			32G	B HBM2	250W	4)	(DP			1			
Storage Controller				li li	nterface	е	RAID)	Cache				
Storage Controller													
NVMe Basic	Ctavana Cantuallar	9440-8i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5											
NVMe Premium	Storage Controller									4, SuperCa			
NVMe for Intel SSD Opt PCIe NVMe 0/1/10/5													
Disk Type													
Storage Support SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB/6TB 6									Max	Otv	إ!		
Storage Support 2.5" SATA HDD SATA 6Gb/s 7.2K 500GB/500GB FIPS 6					1TR		6TB				_ 1		
M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 9 PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type Maximum Drives Qty													
PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type Maximum Drives Qty	Storage Support												
Bay Type Maximum Drives Qty		M.2 PCIe SSD PC	/le										
Bay Type Maximum Drives Qty		PCIe AIC SSD PC	le NVN	Ле	480GB 2 (
	usea)							;u)	_				
			M.2 slot 9x M.2 SSD (2 onboard, 7 via PCIe to M.2 adapter)										
Tex bays Supports the following: 2x half-height optical drives		• 2x half-	2 flex bays. Supports the following: 2 half-height ontical drives										
2x 5.25" 9.0mm optical drives		• 2x 5.25	" 9.0m	m optical (drives								
• 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD	Ctavana Baua												
Storage Bays 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure	Storage Bays						ccess S	tora	ge Enclosur	e			
1x flex module for the following options: Tray 1: 9.0mm optical		' IX liex i			nowing	options:							
Tray 2: 15-in-1 USB 3.0 reader, 2x Thunderbolt, or 4-digit diagnostic display		Tray 2:	15-in-1	USB 3.0				r 4-0	digit diagnos	stic display			
Port 1 and 2: Front USB 3.0 Type-C or eSATA													
	I							OLIE	OC.		- 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) 										e ontional)			

	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%, One fixed 900W, autosensing, 92%,	80 PLUS Platinum qualified 80 PLUS Platinum qualified						
	Media reader		els. 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	d 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	Front panel warning LED. ThinkStation Diagnostics for Windows. Photo-audio transfer with Lenovo PC Diag-nostics for Android and iOS. Optional front 4-digit diagnostic display on flex module							
	Base warranty	1 or 3-year limited onsite service with 9x5/NBD							
	HD Audio	Realtek ALC662 codec							
	Front ports	4x USB 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)							
	Rear ports	2x USB 2.0, 4x USB 3.0, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2							
	Optional ports	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 1x USB Type-C on flex module, USB 3.1 gen 1 Rear: 1x COM port 2x USB Type-C ports via PCIe adapter, USB 3.1 gen 2. One 15W, one 5W Internal: 1x internal USB 3.0 port							
		Temperature - operating Temperature - storage (no package)	50 °F to 95 °F (10 °C to 35 °C) 14 °F to 140 °F (-10 °C to 60 °C)						
		Temperature - storage (with package)							
	Environmental	Altitude - operating							
	specification	Humidity - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)						
		Humidity - storage (with package)	10%~80%, non-condensing						
4		i furnicity - 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 9US						
╝	ISV certifications	Please visit www.thinkworkstations.co	m/isv-certifications/						
\neg									

- 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

	To a second and the s										
Form factor	25L Tower										
Dimensions	175mm/6.89" W x 426mm/16.77" D x 376mm/14.8" H (with feet)										
Weight	Maximum configuration: 31.97 lb (14.5kg)										
	Up to one 140W Int	el Xeor	n W family	proces	sor:						
Up to one 140W Intel Xeon W family processor: • Up to 18 cores at 2.3 GHz											
Processor Family	 Up to 4.0 GHz with 4 cores Up to 24.75 MB cache 										
	 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	DDR4-2666 RDIMN		41111010								
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	pen ended				
	Graphics		mory	Power		ector	SLI / NVlink	Max Qty			
	NVS 810		DDR3	68W	8xmi			1			
	Quadro P400		GDDR5	30W	3xmi			2			
Diagrata Crambias	Quadro P600		GDDR5	45W	4xmi			2			
Discrete Graphics Offering	Quadro P620 2GB GDDR5 40W 4x miniDP 2 Quadro P1000 4GB GDDR5 50W 4xminiDP 2										
Offering	Quadro P1000 4GB GDDR5 35W 4XIIIIIDP 2 Quadro P2000 5GB GDDR5 75W 4xDP 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	Type		Interface	9	RAID	C	ache			
	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 PCIe NVMe 0/1/10										
	NVMe for Intel SSD Opt PCIe NVMe 0/1/10/5										
	Disk Type II	nterface	RPM		Offering		Max	Qtv			
	3.5" SATA HDD SA			1TB	/2TB/4TB/	6TB		1			
Storage Support	2.5" SATA HDD SATA 6Gb/s 7.2K 500GB/500GB FIPS 4										
	2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB/2TB 4							-			
	M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 5								_		
Bay Type Maximum Drives Qty											
	M.2 slot 5x M.2 SSD (2 onboard, 3 via PCIe to M.2 adapter)										
	2 flex bays. Supports the following:										
	2x half-height optical drives 2x 5 25" 0.0mm entired drives										
	 2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 										
Storage Bays	1 v 3 5"/2 5" SATA SSD/HDD with Front Access Storage Enclosure										
- '	• 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	, -						

Supports up to 5y M 2 SSD + 4y 3 5" HDD/4y 2 5" SSD/4y 2 5" HDD										
_	Max Storage	Supports up to 5x M.2 SSD + 4x 3.5" HDD/4x 2.5" SSD/4x 2.5" HDD All HDD: 24TB using 4x 3.5" HDD								
┪		All SSD: 18TB using 4x 2.5" SATA SSD and 5x M.2 SSD								
┨	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 i219LM), supports Wake-on-LAN. Optional PCIe ethernet or wireless adapters are available								
4	WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to							
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 module	Optional front 4-digit diagnostic display on flex							
	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 analog audio ports (line-in, line-out, mic-in), 2x PS/2								
	Optional ports	Supports the following optional ports: Front: 2x Thunderbolt ports (USB Type-C) supports video-out 1x eSATA on flex module 1x USB Type-C on flex module, USE Rear: 1x COM port 2x USB Type-C ports via 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.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













Slot 1 (CPU2)	PCle 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	i Opt		4110110						
Form factor	36L Tower									
Dimensions	175mm/6.89" W x 485mm/19.1" D x 446mm/17.6" H (with feet)									
Weight	Maximum configurat	ion: 52.	.25 lb (23	3.7kg)						
Processor Family	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								e, Silver,	
Processor Sockets	. , , ,									
Chipset										
Memory Sockets	Intel C621 Chipset									
	12 DIMM sockets with 12 channels. 6 DIMM sockets with 6 channels per processor									
Memory Types	DDR4-2666 RDIMM		M) 00	40D /DD	D4 0000		`			
Memory Capacity	768GB (DDR4-2933	RDIIVII	vi) or 38	4GB (DD	H4-2666	RDIMIM)			
Memory Protection	ECC									
Expansion slots	Slot 1 (CPU2) Slot 2 (CPU1) Slot 3 (CPU1) Slot 4 (CPU1) Slot 4 (CPU1) Slot 5 (CPU1) Slot 6 (PCH) PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x8, full height, full length, 25W, open ended PCl, full height, full length, 75W, double-width PCl, full height, full length, 25W PCle 3.0 x4, full height, half length, 25W, open ended									
	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	1	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				4xDP, 1x				1	
	Quadro RTX 6000				4xDP, 1x				1	
	Quadro RTX 8000				4xDP, 1x				1	
	Quadro GP100		B HBM2		1xDVI-E		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				
	9440-8i PCIe			3b/s, SAT		0/1/10				
Storage Controller	9460-16i PCle				A 6Gb/s			4GB DDR4	, SuperCap	
	NVMe Basic	Opt		Cle NVM		0/1/1				
	NVMe Premium	Opt		Cle NVM		0/1/10				
	NVMe for Intel SSD	Opt	Р	Cle NVM	e	0/1/10	/5			
	Disk Type In	terface	rface RPM		Offering		Max Qty (Blind connection + 94 used)		ión + 9460)	
	3.5" SATA HDD SATA 6Gb/s			1TB/2TB/4TB/6TB		6 (Also supports additional 4x 2.5" SATA SSD/HDD)				
Storage Support	2.5" SATA HDD SAT				3/500GB FIPS		10			
			/s 10K	300GB/600GE			8			
	2.5" SATA SSD SAT			256GB/5	12GB/1T	B/2TB		10		
	2.5" PCIe SSD PC			OECOD/5	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	IG		-00GB					

M.2 slott Bx M.2 SSD (2 onboard, 7 via PCIe to M.2 adapter) 2		Bay Type Ma	aximum Drives Qty				
Place bays. Supports the following:	Storage Bays						
* 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 drives * 1x 5.25" 9.0mm optical drives * 1x 5.25" 9.0mm optical drives * 1x 5.25" 9.0mm optical drives * 1x 5.25" 9.0mm optical drives * 1x 5.25" 9.0mm optical drives * 1x 5.25" 9.0mm optical drives * 1x 6.25" 9.0mm optical drive							
Piex Bay Flex Bay							
Flex Bay Fle							
Flex Bays Flex Bay In x 3,5°/2.5° SATA SSD/HDD with Front Access Storage Enclosure Ix flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.0 reader or 2x Thunderbott 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 3.5° SATA HDD 4x 3.5° SATA HDD 4x 3.5° SATA HDD 4x 3.5° SATA HDD 4x 3.5° SATA HDD 4x 3.5° SATA SSD/HDD or 8x 2.5° SA5 HDD (Blind connection needed) 8x 2.5° SATA SSD/HDD or 8x 2.5° SA5 HDD (Blind connection needed) 8x 2.5° SATA SSD/HDD or 8x 2.5° SA5 HDD (Blind connection needed) 8x 2x 2.5° PCLE SSD +2x 3.5° 12.5° disks (Blind connection needed) 8x 2x 2.5° PCLE SSD +2x 3.5° 12.5° disks (Blind connection needed) 8x 2x 2.5° PCLE SSD +2x 3.5° 12.5° disks (Blind connection needed) 8x 2x 2.5° PCLE SSD +2x 3.5° SATA SSD, 9x M.2 SSD, and 2x PCle AIC SSD AII HDD: 36TB using 6x 3.5° HDD AII SSD: 38.96TB using fox 2.5° SATA SSD, 9x M.2 SSD, and 2x PCle AIC SSD Supports one of the following: 9 One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 9 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 10 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 10 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 10 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 10 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified 10 One fixed 900W autosensing, 92%, 80 PLUS Platinum qualified							
Storage Bays 1 x flex module for the following options: 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		1 1 2 5 7 5 CATA COD/HDD with Front Access Storage Englacure					
Tray 2: 15-in-1 USB 3.0 reader 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							
Power supply Po		Tray 1: 9.0mm optical					
Port 1 and 2: Front USB 3.0 Type-C or eSATA 2 x 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 4 x 3.5' SATA HDD 4 x 3.5' SATA HDD 5 x 2 x 2.5' PCE SSD + 2x 3.5' SATA SSD/HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Blind connection needed) 8 x 2.5' SATA SSD/HDD or 8 x 2.5' SASH HDD (Slind connection needed) 8 x 2.5' SASH SASD/HDD or 8 x 2.5' SASH HDD (Slind connection needed) 8 x 2.5' SASH SASD/HDD or 8 x 2.5' SASH HDD (Slind connection needed) 8 x 2.5' SASH SASD/HDD or 8 x 2.5' SASH SSD, and 2 x PCIe AIC SSD 8 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2.5' SASH SASD/HDD (Slind connection needed) 9 x 2 USB 2.0 card reader on most models. Optional HDS (Slind connection needed) 9 x 3 x 3 x 4 x 4 x 5 x 4 x 4 x 5 x 4 x 4 x 4 x 4		Tray 2: 15-in-1 USB 3.0 read	der or 2x Thunderbolt				
4 disk bays (2 bays standard, 2 bays optional). Supports one of the following configurations: Disk bay		Port 1 and 2: Front USB 3.0	Type-C or eSATA				
Configurations: Disk bay							
Disk bay * 4x 3.5 'SATA HDD + 4x 2.5" SATA SSD/HDD (Blind connection needed) * 8x 2.5" SATA HDD + 4x 2.5" SATA HDD Have 2.5" SATA HDD Have 2.5" SATA HDD Have 2.5" SATA HDD Have 2.5" SAS HDD (Blind connection needed) * 2x 2.5" PCIe SSD + 2x 3.5" LDD (Blind connection needed) * 2x 2.5" PCIe SSD + 2x 3.5" LDD (Blind connection needed) * 2x 2.5" PCIE SSD + 2x 3.5" LDD (Blind connection needed) * 2x 2.5" PCIE SSD + 2x 3.5" LDD (Blind connection needed) * 2x 2.5" SDD 4x 2.5" SDD 4x 2.5" SDD 16x 2.5" HDD + 2x PCIe AIC SSD AII HDD: 36TB using 6x 3.5" HDD AII SSD: 38.96TB using 10x 2.5" SATA SSD, 9x M.2 SSD, and 2x PCIe AIC SSD Supports one of the following: One fixed 6990W, autosensing, 92%, 80 PLUS Platinum qualified One fixed 990W, autosensing, 92%, 80 PLUS Platinum qualified Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet are available Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet are available Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 12 via UEFI settling. Chassis intrusion switch. Optional access panel lock, Kensington lock, and pad lock Intel AVT Intel Active Management Technology 11 Front panel warring LED. ThinkSta-fion Diagnostics for Windows. Photo-audio transfer with Lenovo PC Diag-nostics for Android and iOS. Optional front 4-digit diagnostic display on flex module Base warranty 1 or 3-year limited onsite service with 9x5/NBD Healtek ALC662 codec Optional ports 4x USB 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm) 2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front: 1 x USB Type-C on flex module, USB 3.1 gen 1 Femerature - storage (with package) 14 °F to 140 °F (10 °C to 35 °C) Temperature - storage (2 bays optional). Supports one of the following				
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Environmental Certifications RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BA0007US and 30BA0008US SV certifications Please visit www.thinkworkstations.com/isv-certifications/			·				
Certifications on model 30BA0007US and 30BA0008US SV certifications Please visit <u>www.thinkworkstations.com/isv-certifications/</u>		rumuny - storage (with package)	10%~90%, non-condensing				
Certifications on model 30BA0007US and 30BA0008US SV certifications Please visit <u>www.thinkworkstations.com/isv-certifications/</u>	Environmental	RoHS-compliant GREENGUARD EPEAT Silver rating ENERGY STAR 6.1 qualified					
SV certifications Please visit <u>www.thinkworkstations.com/isv-certifications/</u>	Certifications	on model 30BA0007US and 30BA0008US					
	Note:	ions Flease visit <u>www.tnirkworkstations.com/isv-certifications/</u>					

- 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 configuration: 71.3 lb (32.3kg)								
Processor Family	Up to two 205 W Gen 1 or Gen 2 Intel Xeon Scalable family processors, Bronze, Silver, Gold, or Platinum: • Up to 28 cores at 2.5 GHz • Up to 3.6 GHz with 4 cores • Up to 38.5 MB cache • Up to DDR4-2933 memory speed							nze, Silver,	
Processor Sockets	2x FCLGA3647								
Chipset	Intel C621 Chipset								
Memory Sockets	16 DIMM sockets w							per pro	cessor
Memory Types	DDR4-2666 RDIM								
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 1 (CPU1) PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x4, full height, full length, 25W, open ended PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x16, full height, full length, 25W, open ended PCle 3.0 x4, full height, full length, 25W, open ended PCle 3.0 x16, full height, half length, 75W PCle 3.0 x16, full height, full length, 75W PCle 3.0 x16, full height, full length, 75W PCle 3.0 x16, full height, full length, 75W								
	Graphics	Memo		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	DR6	160W	3xDP, 1xVir	tualLink			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
			IDIVIZ						
	Storage Controller Onboard Intel RST			Interf SATA 6		0/1/10		(Cache
	9440-8i PCle		SAS 1		SATA 6Gb/s				
Storage Controller	9460-16i PCle	•			SATA 6Gb/s				B DDR4,
Storage Corni one.	NVMe Basic	Opt	0,10	PCIe N		0/1/1		Sı	perCap
	NVMe Premium	Opt		PCIe N		0/1/10			
	NVMe for Intel SSI			PCIe N		0/1/10			
			DDM			0, 1, 1	,,,,		0:
	Disk Type Interface		RPM Offering					Qty used)	
	3.5" SATA HDD SATA 6Gb/s		7.2K	1TB/2TB/4TB/6TB		6 (Also supports additional 4x 2.5" SATA SSD/HDD)			
Storago Support	2.5" SATA HDD SATA 6Gb/s			500GB/500GB FIPS		PS	10		
Storage Support	2.5" SAS HDD SA		10K	300GB/600GB			8		
	2.5" SATA SSD SA			256GB/512GB/1TB/2TB		/2TB			
	2.5" PCIe SSD PC	<u>Cle NVMe</u> Cle NVMe		1.5TB 256GB/512GB/1TB/2TB		/OTP	9		
	M.2 PCIe SSD PC			200GE	480GB	1210			
	I CIE VIO OOD II (JIO IN VIVIE			-00GD				

	Pay Type					
	Bay Type Maximum Drives Qty M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter)					
	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:					
	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					
Storage Bays	1x flex module for the following options.					
	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					
	flex module					
Network	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN					
interfaces	on both two ports. Optional PCle ethernet are available					
WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to					
Diuetootri	867Mbps Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to					
Security features	1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensington					
Joseph House	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	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)					
Jili porto						
	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2					
·	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports:					
·	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front:					
·	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front: 2 x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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					
·	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 1x USB Type-C on flex module, USB 3.1 gen 1					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 1x USB Type-C on flex module, USB 3.1 gen 1 Rear:					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 1x USB Type-C on flex module, USB 3.1 gen 1 Rear: 1x COM port					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 1x USB Type-C on flex module, USB 3.1 gen 1 Rear:					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 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					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 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:					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 1x eSATA 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					
Rear ports Optional ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 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)					
Rear ports Optional ports Environmental	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front: 2 X Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out 1 x eSATA on flex module 1 x USB Type-C on flex module, USB 3.1 gen 1 Rear: 1 X COM port 2 x USB Type-C ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W Internal: 1 x 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)					
Rear ports Optional ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 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)					
Rear ports Optional ports Environmental	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 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) Altitude - operating (Unpressurized): 0-10000ft (0-3048m)					
Optional ports Environmental specification	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 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) Altitude - operating (Unpressurized): 0-10000ft (0-3048m) Humidity - operating 10%~80%, non-condensing Humidity - storage (with package) 10%~90%, non-condensing					
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Optional ports Environmental specification	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x 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 • 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) Altitude - operating (Unpressurized): 0-10000ft (0-3048m) Humidity - operating 10%~80%, non-condensing Humidity - storage (with package) 10%~90%, non-condensing					

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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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 0°~90° **Monitor Stand**

Height Adjustable Foot





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



the monitor in the way that suits your style

Panel Size 14-inch

Panel Type In-Plane Switching

Backlight **WLED**

16:9

Dot/Pixel Per Inch (DPI/PPI)

Viewing angle (H x V @ CR 10:1) 178° / 178°

Refresh Rate 60 Hz

300 cd/m²

Dynamic Contrast Ratio (typical) 3M:1

72%

16.7 Million

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

Yes

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

(Pon)

output)

ENERGY STAR® Power Consumption

Power Consumption Sleep/Off

(E_{TEC}) 15.53 kWh

Mode < 0.3 W

Tilt -5°~90° **Eye-care Technology**

Low blue light

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

Aspect Ratio

Resolution 1920 x 1080

6ms with OD

Brightness (typical)

Contrast Ratio (typical)

Colour Gamut NTSC (CIE 1931)

Color Support (typical)

Color Depth

ENERGY STAR® Power Consumption

4.88 W



Tilt angle: 0°~90°

Remarkable flexibility: position

Power Consumption Switch-Off Mode < 0.3 W **Temperature - Operating**

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

157

Response Time (typical)

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

USB Type-C/Power Delivery Up to 65 W

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

Tilt Angle (front/back)

-5° / 90°

Mounting Support Yes (100 mm) Kensington™ Lock Slot

Cable Management Yes

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 Size Unpacked w/stand

Bezel Width (top / bottom)

 $(D \times H \times W) (mm / inch)$ (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 Stand base footprint area (mm²)

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

260.87 x 69.55 mm /

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)

0° to 40°C

Humidity - Operating

30 to 80%

0 to 5000 m

Temperature - Non-operating -20° to 60°C

Humidity - Non-operating 30 to 90% **Altitude - Operating**

Altitude - Non-operating

0 to 40,000 ft **Arsenic-free Glass** Yes

PVC free Yes Mercury free

85%

PCC % of plastic resins

Geography Availability

WW Warranty 3 Years

ENERGY STAR® Rating 7.1

Bronze

CCC Yes **EPEAT**

RoHS (EU 2002/95/EC) Yes (Arsenic free / Pb free / Mercury free)

Image Quality Capability ISO 9241-307

China Energy Efficiency Standard

Low Blue Light / Eye Comfort

Windows Certification

Windows 7 / 10



Yes (Low Bluelight)















Name E1922s Wide Flat Panel Monitor

Case color **Black**

Type-model 60G2AAR6US / 60G2AAT6EU

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

Viewable image size

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

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

Brightness 200 nits or cd/m2 (typical)

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

Color gamut 72%

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

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

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

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

6.03 lb; 2.74 kg Weight

3 year (includes backlight) March 2014 Limited warranty4

Available date

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

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

Preset resolutions VGA:

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

SXGA: 1280x1024 WXGA: 1366x768

Presets / user settings Standard presets: 15

user settings: 16

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

Rotating screen

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

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

Multiple input None

Monitor connectors

Signal cables

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 18.5-inch monitor

• Supports HD 1366x768 resolution

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

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

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

Microsoft Windows 8 / Windows 8.1 certified



ThinkVision E1922s Wide Monitor

Lenovo February 2014













E2054 Wide Flat Panel Monitor Name Raven black

Case color Type-model 60DFAAR1US / 60DFAAT1EU

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

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

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

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

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

Viewing angle at 10:1 CR

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

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

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

6.17 lb; 2.8 kg Weight

Limited warranty 3 year (includes backlight)

Available date November 2015

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

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

Preset resolutions 640x480, 720x400

SVGA: 800x600 XGA: 1024x768

1280x768, 1280x1024 SXGA:

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

Presets / user settings user settings: 10

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

Rotating screen None

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

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

Multiple input None

Monitor connectors

Signal cables

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 19.5-inch monitor

• Supports HD 1440x900 resolution

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

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

Microsoft Windows 10 certified



ThinkVision E2054 Wide Monitor

Lenovo November 2015











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

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

Viewable image size

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

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

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

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

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

Dimensions (HxWxD)

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

integrated (no external brick-like power supply)

10.69 lb; 4.85kg Weight

3 year (includes backlight) April 2015 Limited warranty4

Available date

VESA-compliant² VESA DDC2B/CI, EDID 1.3

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

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

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

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

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

Features

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

- Microsoft Windows 10 certified



ThinkVision LT1913p Square Monitor

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

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













T1714 Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FDHAR1US / 60FDHAT1EU

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

Viewable image size

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

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

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stand

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

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

Weight Limited warranty 5.75 lb; 2.61kg

3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

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

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

Rotating screen None

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

Control features

Multiple input

Monitor connectors

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

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

17-inch Square LCD monitor

Supports SXGA 1280x1024 resolution

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

Mercury Arsenic free glass

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

 Microsoft Windows 8.1 certified Microsoft Windows 10 certified



ThinkVision T1714 Monitor













T1714p Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FELAR1US / 60FELAT1EU

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

Viewable image size

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

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

Brightness 250 nits or cd/m2 (typical)

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

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

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

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

8.71 lb; 3.95kg

Weight Limited warranty 3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

Presets / user settings Standard presets: 22;

user settings: 22

Features

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



ThinkVision T1714p Monitor

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

Rotating screen None

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

Control features

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

Monitor connectors

Signal cables

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

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

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

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

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

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

See all monitors at www.lenovo.com/thinkvision













Name T2054p Wide Flat Panel Monitor 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 Dimensions (HxWxD)

13.62" H x 17.88" W x 9.55" D; 345.9mm H x 454.2mm W x 242.6mm D 14.5 watts typical, 21 watts maximum, <0.3 watts standby/suspend, universal, integrated (no external brick-like power supply) Power supply

8.16 lb; 3.70 kg **3 year** (includes backlight)
September 2015 Weight

Limited warranty4 Available date

VESA-compliant² Power management Ergonomics Emission standards

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 Environmental

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

SVGA: 800x600 XGA:

1024x768, 1152x864 1280x800, 1280x1024 SXGA: WXGA: 1366x768

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

Features

• Widescreen 19.5-inch monitor • Supports 1440x900 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 T2054p Wide Monitor

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
Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Control features Multiple input Dual input (two different PCs attach to two different connectors; one PC snows image, selectivia L (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

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	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	



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-

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Accessories

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

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













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	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	













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















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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 x H x W) (mm/inch)

(Highest Position)

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

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

(Head Only)

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





















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

Kensington MicroSaver Cable Lock

73P2582 Kensington Twin Head Cable Lock 45K1620

Accessories

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 22.0-inch monitor

• Supports 1680x1050 resolution Supports ThinkCentre Tiny Clamp Bracket

Includes dual input connection for attachment to two

systems concurrently (analog and digital) ÉPEAT Gold certified

Supports optional soundbar

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

Microsoft Windows 10 certified

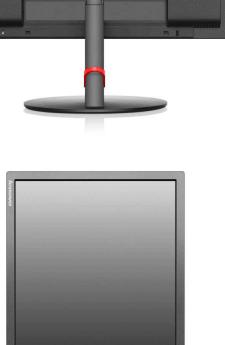


ThinkVision T2254 Wide Monitor

© Lenovo (T2254) November 2016















T2254p Wide Flat Panel Monitor Name

Bezel color Raven black

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

60CCMAT2EU / 61BAMAT2EU

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

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

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

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

Pixel response time 5ms (typical) Color gamut

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

Bezel width Dimensions (HxWxD)

371.7mm H x 509.3mm W x 242.7mm D

Power supply

20 watts typical, 25 watts maximum,

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

Weight Limited warranty

10.14 lb; 4.60 kg

3 year (includes backlight) Available date March 2015

VESA-compliant Power management Ergonomics

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 Emission standards FCC Class B

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

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

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

WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 28;

user settings: 20

Features

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



ThinkVision T2254p Wide Monitor

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

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

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

Multiple input Monitor connectors

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

Signal cables

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

Security

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

1.8 meter black power cord

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

Accessories

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

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













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

Bezel color

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

Viewable image size Max view area (W x H)

Native resolution Aspect ratio 16:9 Pixel pitch (mm)

Dot/Pixel per Inch 102 dpi

Brightness 250 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

Power management Ergonomics Emission standards Environmental

FCC Class B

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

640x480, 720x400 800x600, 832x624 VGA: SVGA:

XGA: 1024x768, 1152x864 SXGA: 1280x1024 WXGA+: 1440x900, 1600x900

WSXGA+: 1680x1050

Presets display modes Presets: 24; user modes: 20

Black

White LED backlight

21.5" (**546mm**) diagonal 18.74" x 10.54" (476.1mm x 267.8mm) **1920x1080**

0.248 x 0.248 mm

1000:1 (typical)

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

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;

485.8mm H x 489.7mm W x 251.9mm D

18 watts typical, 43 watts maximum (with USB 3.0 hub),

<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

ENERGY STAR® qualified ISO 9241-307

Full HD: 1920x1080

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

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

Rotating screen On screen display Control features USB hub Multimedia

Screen pivots 90 degrees from landscape to portrait 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) Integrated speakers, dual-array microphone, audio-in and Audio-out, optional sound bar supported Integrated FHD camera with IR

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













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) 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) 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 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 23.0-inch monitor

· Supports optional soundbar

EPEAT Gold certified

• Supports 1920x1080 resolution

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified

ThinkVision T2324d Wide Monitor













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

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

Rotating screen On screen display Control features USB hub

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

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

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

Multiple input Monitor connectors

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

(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













T2454p Wide Flat Panel Monitor Name Bezel color Raven black 60F9MAR1US / 60F9MAT1EU Type-model Panel 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

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

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

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

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

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

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)

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

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

Features

 Widescreen 24.0-inch monitor • Supports 1920x1200 resolution

Supports ThinkCentre Tiny Clamp Bracket

Supports optional soundbar

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

EPEAT Gold certified

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

Microsoft Windows 10 certified



ThinkVision T2454p Wide Monitor

73P2582

45K1620













T24d Wide Flat Panel Monitor Name

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

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

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)
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 (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

Mounting features

(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) 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 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)

Stand Base Footprint Area

(mm) (inches) Weight Packed

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

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

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.





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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

23.8" Wide In-Plane-Switching

WLED FHD (1920 x 1080)

16:9 Yes Yes

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

4 ms / 6 ms

5

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

DIMENSIONS (W x D

Size Packed (mm) 422 x 622 x 190 (inches) 16.61" x 24.48" x 7.48" Size Unpacked with Stand

Lowest Position 540.2 x 261.75 x 373.4 (mm) 21.26" x 10.3" x 14.7" (inches)

Highest Position (mm) 540.2 x 261.75 x 483.4 21.26" x 10.3" x 19" (inches)

Size Unpacked without Stand (Monitor Head Only)

540 2 x 46 45 x 325 98 (mm) (inches) 21.26" x 1.82" x 12.83" Stand Base Footprint Area

250 x 250 (mm) 9.84" x 9.84" (inches)

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

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 VGA, DisplayPort™, USB, USB Hub Yes (3.5 mm)

Audio Out Power

VGA + HDMI™ +

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

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)

Quick Setup Guide **CERTIFICATIONS**

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





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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			
On screen display	Screen pivots 90 degrees from landscape to portrait 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			
Multiple input			
Monitor connectors			
(2) Display of (1.2), digital, NDSF-Compitant (3) USB 3.1 Type-C Signal cables (1) 1.8 meter USB Type-C to USB Type-C cable			
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

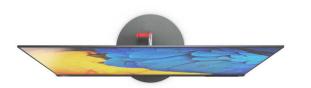












Lenovo ThinkVision X24-20

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

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

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

Power supply

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

integrated (no external brick-like power supply)

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

3 year January 2017 Available date

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

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

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor

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

 Support ThinkCentre Tiny • Supports optional soundbar

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27q Monitor













Lenovo 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/mo See all monitors at www.lenovo.com/thinkvi	













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





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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













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Think Vision T25d-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

533.45 x 338.76mm

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Refresh Rate

60Hz

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16.7M

CONNECTIVITY

Video Input Signals HDMI 1.4 + DP 1.2 + VGA

Video Cables Supplied

DP + HDMI*

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC

Audio Out

Yes (3.5mm)

POWER

Power Consumption (Typical/Max)

25W/66W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

16.54W

ENERGY STAR® (E_{тес}) 52.06kWh

Voltage Required

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

706 x 450 x 160mm/ 27.79 x 17.72 x 6.30 inches

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

260.4 x 399.5 x 548.7mm/ 10.25 x 15.73 x 21.60 inches

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

260.4 x 509.5 x 548.7mm/ 10.25 x 20.06 x 21.60 inches

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

43.0 x 369.1 x 548.7mm/ 1.69 x 14.53 x 21.60 inches

Weight Packed

7.8ka/17.20lbs.

Weight Unpacked

5.5kg/12.13lbs.

Weight (Monitor Head Only) 3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Optional Soundbar Support

Υe

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Yes (110mm)

Pivot

+/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington™ Lock Slot

163

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

Yes

TCO

TCO 8.0/TCO Edge 2.0

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

ULE Gold













*For NA and LA only

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

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Think Vision T25m-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

535 45 x 338 76mm

Panel Type

In-Plane Switching

Backlight

WIFD

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000.1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16 7M

CONNECTIVITY

Video Input Signals

HDMI 1.4 + DP 1.2 + USB 3.1 Type-C™ (DP 1.2 Alt Mode)

Video Cables Supplied

USB 3.1 Type-C™

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C™)

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

POWFR

Power Consumption (Typical/Max)

30W/150W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

< 0.3 W

Power Supply

Internal

ENERGY STAR® (P.,.)

17.05W

ENERGY STAR® (ETEC)

63.12kWh

Power Voltage

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

706 x 450 x 160mm/ 27.79 x 17.72 x 6.30 inches

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

260.4 x 399.5 x 548.7mm/ 10.25 x 15.73 x 21.60 inches

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

260.4 x 509.5 x 548.7mm/ 10.25 x 20.06 x 21.60 inches

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

43.0 x 369.1 x 548.7mm/ 1.69 x 14.53 x 21.60 inches

Weight Packed

7.8kg/17.20lbs.

Weight Unpacked 5.5kg/12.13lbs.

Weight (Monitor Head Only)

3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Smart Power*

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

Internal Speakers

Yes $(3W \times 2)$

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot

+/-90°

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand 1 × Power Cable

1 × USB Type-C[™] to Type-C[™] cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

7.1

EU RoHS

Yes

CCC Yes

TCO

TCO 8.0/TCO Edge 2.0

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

ULE Gold













*The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to other devices. 75W power delivery by USB Type-C can be achieved when downstream USB ports 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 (Tiny)

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)

 $Kensington^{\mathsf{TM}} \ Lock \ Slot$

Bezel Width (Side)

2.0mm

Yes

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

Ship group

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

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/detail.page?DocID=UM008281

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision



Features

27-inch IPS LED backlit monitor with speaker

• Supports 3840x2160 resolution

Microsoft® Windows® 7 certified

• Microsoft Windows 10 certified

• 3watts x 2 stereo speakers

• 5-Ports USB hub, support USB Type-C

ThinkVision X1 Monitor

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

DISP	LA'	Υ
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Panel Size 27' Panel Type IPS WI FD Backlight Resolution 3840 (H) x 2160 (V)

Aspect Ratio Anti-Glare Yes

596.7 (H) x 335.7 (V) Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) 350 cd/m² 178°/178° Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) 1000:1 Dynamic Contrast Ratio Pixel Pitch (W x H) (mm)

0.1554 x 0.1554

Dot/Pixel Per Inch (DP/PPI) 163 99% sRGB Color Gamut (CIE 1931) Response Time (Extreme/Typical/Off) 4/6/14 ms (G-to-G)

POWER CONSUMPTION

65 W Maximum 135 W 0.5 W Sleep-Mode Switch Off-Mode 0.5 W **Power Supply** External

Power Voltage 100 VAC - 240 VAC Voltage Dynamic Frequency 50 Hz - 60 Hz

SIGNAL INPUT

Video Input Signals DisplayPort™ 1.2 + HDMI™ 2.0 + Thunderbolt™ 3 Video Cables Supplied HDMI™ + Thunderbolt™ 3

Video Cable Length

Yes (4 x USB 3.0) USB Hub

USB Cable Supplied N/A Audio-Jack

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/

Bandwidth

Default Color Temperature Preset Modes

OSD Buttons OSD Languages 30 kHz - 136 kHz 30 Hz - 60 Hz 3840 x 2160

20 Gbps 6500K 24

1.2 / 0.05"

1.2 / 0.05"

18 m

2 Buttons + Tracking Point English, French, Italian, German, Spanish, Japanese, Chinese, Russian

ENVIRONMENTAL

Temperature 0°C - 45°C Operating -20°C - 60°C Non-Operating

8% - 80%

Humidity Operating

Non-Operating 5% - 95% Altitude

16 000 ft Operating Non-Operating 40,000 ft

Arsenic-Free Glass Yes

PVC-Free Yes (W/O cable)

Mercury-Free Yes PCC % of Plastic Resins 25%

DIMENSIONS (W x D x H)

Size Packed (mm) 718 x 140 x 470 28.27" x 5.51" x 18.5" (inches)

Size Unpacked with Stand

(mm) 609.74 x 234.81 x 474.76 24" x 9.24" x 18.69" (inches)

Size Unpacked without Stand (Monitor Head Only)

609 74 x 32 7 x 351 71 (mm) 24" x 1.29" x 13.85" (inches)

Distance from Table to Panel Lowest Pixel at Bottom of Screen

134 / 5.276" (mm / inches)

Highest Pixel at Top of Screen 450 / 17.717"

(mm / inches)

Stand Base Footprint Area

234.81 x 234.81 (mm) (inches) 9.24" x 9.24"

Weight

Starting at 18.45 lbs (8.37 kg) Packed Starting at 12.21 lbs (5.54 kg) Unpacked Monitor Head Only Starting at 9.46 lbs (4.29 kg)

MECHANICAL

Tilt Angle (Front / Back) -5° / 30° Swivel Angle (Left / Right) N/A N/A Lift (mm) N/A Pivot N/A VESA® Mount (mm) Kensington® Lock Slot Yes Cable Management Yes Bezel Color N/A Bezel Width 1.2 / 0.05"

Top (mm / inches) Bottom (mm / inches) Sides (mm / inches)

COMPLIANCE

EPEAT™ Silver **ENERGY STAR® Rating** 7.0 ULE Silver TCO® 70 Yes Windows Certification Windows 10 China Energy Label

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability ww





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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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