

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 556, March 2020

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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.

March 4, 2020 - Version 556

Additions in this update

► New product(s)

ThinkPad 11e Yoga Gen 6

▶ Others

ThinkPad E14 - spec updated

ThinkPad E15 - spec updated

ThinkPad E495 - spec updated

ThinkPad E590 - spec updated

ThinkPad E595 - spec updated

ThinkPad L380 - spec updated

ThinkPad L380 Yoga - spec updated

ThinkPad L390 - spec updated

ThinkPad L390 Yoga - spec updated

ThinkPad L490 - spec updated

ThinkPad L590 - spec updated

ThinkPad T495 - spec updated

ThinkPad X390 - spec updated

ThinkPad X395 - spec updated

ThinkPad Yoga 11e (5th Gen) - spec updated

Withdrawals in this update

► Withdrawn product(s)

None









ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, I	ntel Ce	leron® process	sor, or		Dimensions Weight	WxDxH: 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb / 1.36 kg
		# of Cores	# of Threads I		Burst Frequence	су	Memory Types		cessor aphics	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	_	LPDDR3-1866		tel HD hics 615	Smart card reade	rNone
	Celeron N4100] [1.1 GHz	2.4 GHz				el UHD	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power
	Celeron N4120		4	1.1 GHz	2.6 GHz	z 4MB	4	Grap	hics 600		Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45),
	Pentium Silver N5000	4		1.1 GHz	2.7 GHz	4MB	DDR4-2400		el UHD		headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Pentium Silver N5030			1.1 GHz	3.1 GHz			<u> </u>	hics 605	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
Graphics	Intel HD Graph supports exter supports dual Max resolution	nal dig	gital moni endent di	tor via Hˈ[sɒlav:	OMI or U	SB Typ	e-C;		DMI	Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Chipset					ов туре	-0); 40	196X2160@30	п2 (п	(וואוכ	Security Security chip	Power-on password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
Memory		Intel SoC (System on Chip) platform 4GB or 8GB / 1866MHz LPDDR3 or 2400MHz DDR4 /									None
	soldered to sys	stemb	oard, no	sockets						Fingerprint reade	rNone None
Display	Size Resolution	1	Type Sur	face Bric	ghtness A	Aspect Ratio	Contrast Ratio		Viewing	Battery	Integrated Li-ion 42Wh battery
	11.6" HD (1366)		TN Anti-				400:1 or 500:1	Gamut 45%	t Angle 90°	Max battery life	MobileMark® 2014: 13.9 hr
	11.6" HD (1366)					16:9	800:1	45%	170°	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
Multi-touch (opt)	Capacitive-type			upports 1	10-finger	gesture	e (HD IPS only	/,			One of the following, configurable by model: • Windows® 10 Home 64
Storage	eMMC flash m M.2 SSD / PCI	emory le NVI	on boar Me, PCle	d or 3.0 x 2, 1	I6Gb/s					() [Windows 10 Pro 64Windows 10 Pro in S mode
Optical	None		•	,						Limited warranty	One of the following, configurable by model:
Ethernet	Realtek RTL81	111GL	JS Gigabi	t Network	k Connec	ction					1-year depot repair service
WLAN +	One of the follow										3-year/1-yr battery depot repair service
Bluetooth™		Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (US o								Mil-Spec test	MIL-STD-810G military testing
WWAN SIM card	None None	S-AC 9	5500, VVI-	1282 002	2.11ac +	Dideto	OUT 5.0, IVI.2 C	aru (Oc	3 Offig)	Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant

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



ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, Inte	el Cele	eron® processo	or, 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 Types	Processor Graphics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30 i5-7Y54	2		1.0 GHz 1.2 GHz	2.6 GHz 3.2 GHz	4MB 4MB	LPDDR3-1866	Intel HD Graphics 615	Smart card reade Media reader Ports	erNone MicroSD card reader Two USB 3.1 Gen 1.
	Celeron N4100			1.1 GHz	2.4 GHz	4MB		Intel UHD	Ports	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	Celeron N4120		4	1.1 GHz	2.6 GHz	4MB		Graphics 600		HDMI1.4, Ethernet (RJ-45), headphone / microphone combo jack,
	Pentium Silver N5000	4		1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD	0 1 1 1 11	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Pentium Silver N5030			1.1 GHz	3.1 GHz	4MB		Graphics 605	Control buttons Camera	Power button, volume control button One of the following, configurable by model:
Graphics	Intel HD Graph supports exter supports dual Max resolution	nal did	cital mor	nitor via HŒ	OMI or USE	3 Type	-C:	dz (HDMI)	Audio support	720p: HD720p resolution, low light sensitive, fixed focus World facing: Rear camera, 5MP resolution, auto focus HD Audio, Realtek® ALC3287 codec Dolby Audio™ / stereo speakers, 2W x 2 / monaural microphone, headphone / microphone combo jack
Chipset Memory	Intel SoC (Sys 4GB or 8GB /	tem oi 1866N	n Chip) /IHz LPE	platform DDR3 or 24					Keyboard Touchpad	6-row, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
	soldered to sys								Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Display	11.6" (295mm) 16:9 aspect ra) HD (1366x76	58), anti-gla	are, LED b 170° viewir	ackligh	nt, IPS, 250 ni	ts, Porilla® Glace	System Mgt	None
MultiTouch	Capacitive-type	e mult	i-touch,	supports 1	0 fingers	ig ung	no, coming c	aorilia Giaco	Fingerprint reade	rNone
Hinge	Yoga hinge, 36	0 deg	ree		_					
Convertible mode Pen (Optional)	e Laptop, tent, si • Pen upgrada	tanu a ble (w	ind lable ith a pei	a n garage re	eadv)				Battery Max battery life	Integrated Li-Ion 42Wh battery MobileMark® 2014: 12 hrs
() ()	 ThinkPad Pe 	n Pro,	batterie	s required,	on-board	garag	е		Wax battery inc	* Battery life varies significantly with settings, usage, & other factors
Storage	eMMC flash m								AC adapter	45W or 65W slim tip AC adapter or USB Type-C AC adapter
Optical	M.2 SSD / PCI None	le NVI	Me, PCI	e 3.0 x 2, 1	6Gb/s				Preload	One of the following, configurable by model: • Windows® 10 Home 64
Ethernet	Realtek RTL81	I11GL	JS-CG C	Gigabit Net	work Conn	ection			-	Windows 10 Pro 64
WLAN	One of the follow						·			Windows 10 Pro in S mode
	 Intel Wireless 	s-AC 9	260, Wi	-Fi 2x2 802					Limited warranty	One of the following, configurable by model:
Bluetooth™		 Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth wireless, integrated in Wi-Fi + Bluetooth combo adapter 								 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN	None								Mil-Spec test	MIL-STD-810G military testing
SIM card	None								Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant













ThinkPad E14 Platform Specifications

Processor	10th Generation Inte		5 / i7 Proces	sor			Dimensions	Case Material	Dimensions (WxDxH)		
	* i7-10710U is NOT ava	of Base	Max Turbo		Memory	Processor	+	Aluminum	12.80" x 9.13" x 0.70"; 325mm x 232mm x 17.9mm		
		eads Frequenc		Cache	Types	Graphics		PC/ABS	12.80" x 9.13" x 0.81"; 325mm x 232mm x 20.5mm		
	i3-10110U 2	4 2.1 GHz	4.1 GHz	4MB 6MB			1	Aluminum Display cover + PC/ABS Bottom	12.80" x 9.13" x 0.74"; 325mm x 232mm x 18.9mm		
	i7-10510U 4	8 1.8 GHz		8MB	DDR4-2666	Intel UHD Graphics	Weight	Case Material	Weight		
	i7-10710U 6 1	12 1.1 GHz	4.7 GHz	12MB]	Aluminum	starting at 3.81 lb / 1.73 kg		
Graphics	Integrated Graphics		Discrete Gra	phics (N	/lemory)			PC/ABS	starting at 3.90 lb / 1.77 kg		
	Intel UHD Graphics		_ 100.010 00	-	,			Aluminum Display cover	starting at 3.74 lb / 1.69 kg		
	Intel UHD Graphics		AMD Radeon 6				Coop color	+ PC/ABS Bottom	3 3		
	Intel UHD Graphics		adeon RX 640	•		DR5)	Case color Case material	Black or silver Display cover: Aluminun	n or PC/ABS plastic:		
	supports external dig			SB Typ	e-C;		ouco material		n or PC/ABS plastic		
	supports three indep Max resolution: 3840	endent display 0x2160@60H:	ys; z (USB Type:	·C): 38	40x2160@	30Hz (HDMI)	Smart card reade				
Chipset	Intel SoC (System or		<u> </u>	0), 00		00.12 (1.12)	Media reader Ports	None	11 Can 1 (ana Alwaya On)		
Memory	16GB max / 2666MH	Iz DDR4, one	DDR4 SO-D	IMM so	ocket		Ports		8.1 Gen 1 (one Always On), 1 (with the function of Power Delivery and DisplayPort).		
Display	Size Resolution	Type Surfa	ce Brightnes	Aspe				HDMI 1.4b, Ethernet (RJ-	-45), headphone / microphone combo jack,		
	14.0" FHD (1920x1080)			Hall	_			security keyhole * Depending on many factors	s, actual data transfer speed may be lower than theoretical speed		
	14.0" FHD (1920x1080			_	_		Monitor cable	None			
Multi-touch	None	, 11 O 7 ti iti gi	410 200 mile	1 10.	700.1	170	Bundled Accy	None			
Storage	Up to two drives (one M	1 2 SSD and one	HDD)				Camera Audio support	HD720p camera with opt HD Audio, Synaptic® CX1	ional ThinkShutter camera privacy, fixed focus		
Otorage	 HDD / SATA 6.0Gb 	o/s, 2.5" wide,	7mm high, A	ctive P	rotection Sy	rstem™	Addio Support	stereo speakers, 2W x 2,	Dolby® Advanced Audio /		
	 M.2 2280 SSD / SA M.2 2242 SSD / PO 		10 2 0 v 2 or	DCIo 3	20 v 4			dual array microphone, h	eadphone / microphone combo jack		
	 M.2 2242 33D / P0 M.2 2280 SSD / P0 Intel Optane™ Mer 	Cle NVMe, PC	le 3.0 x 4				Keyboard UltraNav™		timedia Fn keys, optional LED backlight be and buttonless Mylar surface multi-touch touchpad		
	M.2 2280, PCIe N\	VMé 3.0 x 4		•	J,		Security		d disk password, supervisor password, security keyhole		
	ry • Intel Optane memo				\/\d= 0.0 · ·		Security chip		rete TPM 2.0, TCG Certified		
<i>(optional)</i> Optical	 Intel Optane™ Mer None 	nory integrate	a with SSD,	PCIE IN	VIVIE 3.0 X	4	System Mgt	Discrete model: firmy None	vare TPM 2.0 integrated in chipset		
Ethernet	Gigabit Ethernet Cor	nection Real	tek B8111G	IS			Fingerprint reade	r Optional: Touch style fing	gerprint reader on power button		
WLAN +	One of the following,						NFČ '	None			
Bluetooth™	Realtek® RTL88220			Bluetoo	th 5.0, M.2	card	Battery	Integrated Li-ion 45Wh bawith 65W AC adapter	attery, supports Rapid Charge (charge up to 80% in 1hr)		
	Intel Wireless-AC 9						Max battery life	MobileMark® 2014: 12.8	hr		
1404/41	Intel Wi-Fi 6 AX201	I, WI-FI 2x2 80	12.11ax + Blu	etooth	5.0, M.2 ca	ard		* Battery life varies significated 45W or 65W USB Type-C	ntly with settings, usage, & other factors		
WWAN SIM card	None None						AC adapter	One of the following, configu	•		
Omi oara	110110						(optional)	Windows® 10 Home 64			
							()	 Windows 10 Pro 64 			
								Windows 10 Pro in S mNo OS	node		
							Limited warranty	1-year mail-in repair se	rvice		
							(optional)	 1-vear depot repair services 	vice		
								 1-year depot with 2-year 	ar system board repair service		
							Mil Coop toot	1-year limited onsite se			
							Mil-Spec test	MIL-STD-810G military to	9		
Nister The 122	cations above may not be		U! -				Environment	EPEAL TO Sliver; ENERGY	Y STAR® 7.1; RoHS-compliant Lenove		



















ThinkPad E15 Platform Specifications

Processor	10th Generation Intel® Core™ i3 / * i7-10710U is NOT available in EMEA				Dimensions Weight	WxDxH: 14.49" x 9.65" x 0.74"; 368mm x 245mm x 18.9mm Starting at 4.3 lb / 1.9 kg
	Processor # of # of Base Number Cores Threads Frequen	cy Frequency Cache			Case color Case material	Black or silver Display cover: Aluminum; Bottom: PC/ABS plastic
	3-10110U 2 4 2.1 GH 15-10210U 4 8 1.6 GH 17-10510U 6 12 1.1 GH 1.1 GH 1.2 GH 1.1 GH 1.2 GH 1.1 GH 1.2 GH 1.1 GH 1.2 GH 1.1	z 4.2 GHz 6MB z 4.9 GHz 8MB	DDR4-2666	Intel UHD Graphics	Smart card reade Media reader Ports	rNone None 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	Integrated Graphics Intel UHD Graphics Intel UHD Graphics Intel UHD Graphics Intel UHD Graphics AMD	Discrete Graphics (M - AMD Radeon 625 (2GE Radeon RX 640 Graphic	3 GDDR5)	DR5)	Monitor cable Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chinast	supports external digital monitor v supports three independent displa Max resolution: 3840x2160@60l	ays; Hz (USB Type-C); 38		30Hz (HDMI)	Camera Audio support	HD720p camera with optional ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
Chipset Memory	Intel SoC (System on Chip) platfo 16GB max / 2666MHz DDR4, one	e DDR4 SO-DIMM so	cket		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	Size Resolution Type Surf 15.6" FHD (1920x1080) TN Anti-1 15.6" FHD (1920x1080) IPS Anti-1	glare 220 nits 16:9	Ratio 400:1	Viewing Angle 90°	Security Security chip	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
Multi-touch	None Up to two drives (one M.2 SSD and or		700.1	170	System Mgt Fingerprint reade NFC	None r Optional: Touch style fingerprint reader on power button None
Storage	 HDD / SATA 6.0Gb/s, 2.5" wide M.2 2280 SSD / SATA 6.0Gb/s M.2 2242 SSD / PCIe NVMe, P M.2 2280 SSD / PCIe NVMe, P Intel Optane™ Memory H10 wit 	, 7mm high, Active Pr Cle 3.0 x 2 or PCle 3 Cle 3.0 x 4	.0 x 4	stem™	Battery Max battery life AC adapter	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 12.2 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optane™ memory (optional) Optical	M.2 2280, PCIe NVMé 3.0 x 4 ✓ Intel Optane memory, PCIe NVI Intel Optane™ Memory integration	Me, PCIe 3.0 x 2 ed with SSD, PCIe N'	VMe 3.0 x	4	Operating system (optional)	 Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode
Ethernet	Gigabit Ethernet Connection, Rea	altek R8111GUS			Limited warranty (optional)	1-year mail-in repair service 1-year depot repair service
WLAN +	One of the following, configurable	by model:			(optional)	1-year depot repair service 1-year depot with 2-year system board repair service
Bluetooth™	 Realtek® RTL8822CE, Wi-Fi 2x2 Intel Wi-Fi 6 AX201, Wi-Fi 2x2 8 					MIL-STD-810G military testing
WWAN SIM card	None None		,		Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

February 2020





ThinkPad E480 Platform Specifications

Processor				e™ i3 / i5 F ele in US an	Processor ad EMEA) o	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 i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
	i5-7200U		4	2.7 GHZ 2.5 GHz	3.1 GHz	3MB	DDR4-2133	620	Smart card reade Media reader	rNone MicroSD card reader
	8th Genera			1					Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On),
	Processor Number	# of Cores	# of Threads	· · · ·	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole
	i3-8130U i5-8250U	2 4	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Camera	*Depending on many factors, actual data transfer speed may be lower than theoretical speed HD720p camera, fixed focus
Graphics	i7-8550U Intel HD G			1.8 GHz Intel UHD	4.0 GHz Graphics 6	8MB 20 in p	rocessor or		Audio support	HD Audio, Synaptic® CX11852 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /
		raphic	s 620 or	Intel UHD	Graphics 6	20 in p	rocessor ar			dual array microphone, headphone / microphone combo jack
	supports e	xterna	ıl digital r	nonitor via					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	supports d Max resolu	ution:	1920x10	80 (HDMÍ)					Security chip (on	Power-on password, hard disk password, supervisor password, security keyhole t)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified
Chipset Memory	32GB max	tel SoC (System on Chip) platform 2GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM socket: System clocks down for processors with lower memory controller								None None Touch style fingerprint reader on the palm rest None
Display					68), anti-gla		D backlight,	,	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: 14	.0" (35	55mm) Fİ	HD (1920x)	1080), anti- 00:1 contra	glare, I	_ED backlig	ght, IPS,	Max battery life MobileMark® 2014: 13.51 hr	with 65W AC adapter MobileMark® 2014: 13.51 hr * Battery life varies significantly with settings, usage, & other factors
Multi-touch	None		·						AC adapter	45W or 65W USB Type-C AC adapter
Storage				and one HE	<i>DD)</i> ride, remov	ahle ur	naradable		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	Some: M.	tive Pr 2 SSD	otection : O / PCIe N	System™ VVMe					Limited warranty	1-year mail-in repair service
Optane™ memor Optical	y <i>Optional:</i> None	Intel O	ptane m	emory, PCI	le NVMe, F	Cle 3.0) x 2		Mil-Spec test	1-year depot repair service MIL-STD-810G military testing
Ethernet		hernet	Connect	tion, Realte	k R8111G	US			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
WLAN + Bluetooth™	One of the following, configurable by model: • Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card • Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card • Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card * Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS								Liviloriillent	El EAT GOIA (GG GITY), ENETTO I GITT G.1, FIGH G GOITPHANT
WWAN SIM card	None None									
	None	may n	ot be ava	ilable in all	regions.					

























ThinkPad E490 Platform Specifications

Supports external digital monitor Via HDMI of USB Type-C; supports dual independent display; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI) Chipset Memory Intel SoC (System on Chip) platform Memory 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 Display Size / Resolution Surface Type Brightness Aspect Ratio R	Processor	8th Generation In	tel® Cor	e™ i3 / i5 / i	7 Processo	or				Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm
Case material Display cover: Aluminum or PC/ABS plastic; Baselson Port American Display cover: Aluminum or PC/ABS plastic; Baselson Port Por						Cache					Starting at 3.87 lb / 1.75 kg
Smart card reader/None T-3655U 1.6 GHz 4.6 GHz 8MB		i5-8265U		1.6 GHz	3.9 GHz	6MB	DDR4-240	ntel UH	HD Graphics	Casa material	Display cover: Aluminum or PC/ABS plastic;
Ports Port			8			OIVID	55210		620	Smart card reade	
Intel UHD Graphics 220 in processor and MM Radeon RX 550X Graphics, 22B GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4996x2304 €00Hz (USB Type-C); 4096x2160 €24Hz (HDMI) Chipset Intel SoC (System on Chip) platform Memory is actually 2666MHz but run at 2400MHz duel-channel capable, two DDR4 SO-DIMM sockets in stalled memory is actually 2666MHz but run at 2400MHz duel to Intel limitation. Display Size / Resolution Surface Type Brightness Aspect Contrast Viewing Multi-louch Ratio R		* i5-8365U is for spe	eicial bid	only							One USB 2.0, two USB 3.1 Gen 1 (one Always On),
Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two DR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two dual-channel capable, two DR4 SO-DIMM sockets 32GB max / 2400MHz DR4, dual-channel capable, two dual-channel capable	Graphics	Intel UHD Graphic AMD Radeon RX supports external supports dual inde	cs 620 in 550X G digital n epender	n processor iraphics, 20 monitor via nt display;	r and 3B GDDR5 HDMI or U	SB Typ	e-C;) 24Hz (F	HDMI)	Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Size / Hesolution Surface Type Brightness Ratio Angle Multi-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 200 nits 16:9 400:1 170° Non-touch 14.0° FHD (1920x1080) Anti-glare TN 200 nits 16:9 400:1 170° Non-touch 14.0° FH	Memory	32GB max / 2400	MHz DE	ÒŔ4. dual-c	hannel cap ut run at 240	able, to	wo DDR4 state to Intel I	SO-DIMI imitation	M sockets		HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /
Security chip 14.0" FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0" FHD (1920x1080) Anti-glare IPS 250 nits 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:0" Fingerprint reader Mone Mone M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 M.2 2280 SSD / S	Display		Resolution Surface Type Brightness Ratio Ratio Angle Multi-lot								6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
14.0" FHID (1920x1080) Anti-glare 1N 220 nits 16:9 40.0"1 90" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 600:1 700" Non-touch System Mgt Fingerprint reader Optional: Touch style fingerprint reader on the palm rest None Optional: Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) None None None None System Mgt Fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: None None None										Security	, , , , , , , , , , , , , , , , , , , ,
None Storage Up to two drives (one M.2 SSD and one HDD)											Integrated model: discrete TPM 2.0, TCG Certified
HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: ■ Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card ■ Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None MFC None	Multi-touch	None									None
• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3.0 x 4 to run at PCIe 3.2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None SMAX battery life Max battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter Max battery life Max battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: • 1-year mail-in repair service • 1-year depot repair service • 1-year limited onsite service Nill-Spec test MIL-STD-810G military testing	Storage	Up to two drives (on • HDD / SATA 6.0	ne M.2 SS)Gb/s. 2	SD and one F .5" wide. 7r	HDD) nm high. A	ctive Pr	rotection S	vstem™		Fingerprint reader NFC	r Optional: Touch style fingerprint reader on the palm rest None
Optional Mone Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None AC adapter 45W or 65W USB Type-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None WWAN None Mil-Spec test MIL-STD-810G military testing		 M.2 2280 SSD / M.2 2242 SSD / M.2 2280 SSD / 	/ SATA 6 / PCle N / PCle N	8.0Gb/s IVMe, PCIe IVMe, PCIe	3.0 x 2 3.0 x 4			-		,	MobileMark® 2014: 13 hr
Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None WWAN None Mil-Spec test MIL-STD-810G military testing		ory Optional: Intel Op								<u>.</u>	45W or 65W USB Type-C AC adapter
WLAN + Bluetooth™ One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card • None WWAN None Mil-Spec test Che of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service 1-year limited warranty 1-year depot repair service 1-year limited onsite service 1-year limited warranty 1-year depot repair service 1-year limited warranty 1-year depot repair service 1-year limited warranty 1-year mail-in repair service 1-year limited warranty 1-year mail-in repair service 1-year depot repair service 1-year limited warranty		Gigabit Ethernet (Connect	ion. Realte	k R8111Gl	JS					
CIM cord None	WLAN +	One of the followi	ing, cont	figurable by Vi-Fi 2x2 80	<i>model:</i> 02.11ac + E	Bluetoo	th 4.2, M.2 oth 5.0, M.	card 2 card		Limited warranty	1-year mail-in repair service1-year depot repair service
SIM card None Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant										Mil-Spec test	MIL-STD-810G military testing
	SIM card	None								Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo

























ThinkPad E490s Platform Specifications

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

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

Lenovo September 2019













ThinkPad E495 Platform Specifications

Processor # of # of Base Max Turbo Cache Memory Processor Requency Gaphics Ryzen 3 2 4 2.6 GHz 3.5 GHz MB L2 / 4 MB L3 DPA-2400 Radeon Vega 3 (Raphics S3500U Ryzen 7 3700U 4 8 2.1 GHz 3.7 GHz 2.8 GHz 4.0 GHz 2.4 MB L3 DPA-2400 Radeon RX Vega 10 Graphics Radeon RX Vega 10 G	m x 19.9mm
Page	m x 21.9mm
Hyzen 7 3500U 4 8 2.1 GHz 3.7 GHz 2MB L2 / 4MB L3 2.3 GHz 4.0 GHz GH	
Radeon RX Vega A.0 GHz 2MB L2 AMB Radeon RX Vega 10 Graphics	
AMD Radeon Vega 3, Vega 8, or RX Vega 10 Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 3840x2160 @ 60Hz (USB Type-C); 3840x2160 @ 30Hz (HDMI) Chipset Memory AMD SoC (System on Chip) platform Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets ' Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation Display Size / Resolution Type Surface Brightness Aspect Ratio Ra	ry and DisplayPort)
Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation Display Size / Resolution Type Surface Brightness Ratio	o jack,
Size / Resolution Type Surface Brightness Aspect Contrast Viewing Ratio Angle Multi-touch 14.0" HD (1366x768) TN Anti-glare 220 nits 16:9 400:1 90° Non-touch 14.0" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 600:1 170° Non-touch None None Storage Up to two drives (one M.2 SSD and one HDD) • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 or PCle 3.0 x 4 Optical Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: Size / Resolution Type Surface Brightness Aspect Contrast Viewing Ratio Angle Ang	
14.0" HD (1366x768) TN Anti-glare 220 nits 16:9 400:1 90° Non-touch 14.0" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 600:1 170° Non-touch 170° Non-touch 14.0" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 600:1 170° Non-touch None	
Multi-touch None Storage Up to two drives (one M.2 SSD and one HDD) HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Multi-touch None Up to two drives (one M.2 SSD and one HDD) M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 or PCle 3.0 x 4 Mone Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: Security Security Chip Discrete TPM 2.0, TCG Certified None NFC None NFC None Battery Integrated Li-ion 45Wh battery, supports Rapid Charge (charge with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors AC adapter AC adapter	-touch touchpad
Storage Up to two drives (one M.2 SSD and one HDD) • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 or PCIe 3.0 x 4 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: Fingerprint reader None NFC None Battery Integrated Li-ion 45Wh battery, supports Rapid Charge (charg with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors AC adapter AC adapter	d, security keyhole
Optical • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 None Max battery life Max battery life * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	
Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + One of the following, configurable by model: * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	e up to 80% in 1hr)
WLAN + Une of the following, configurable by model:	
• Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None SIM card • 1-year mail-in repair service • 1-year depot repair service • 1-year 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.





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 New York Control of the Contr
	i3-7020U		4	2.3 GHz	-	3MB 3MB	DDD4 0400	Intel HD Graphics		 Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS
	i3-7130U i5-7200U	2	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB	DDR4-2133	620	WWAN SIM card	None None
	8th Genera	ation In	itel Core	i3 / i5 / i7 F	Processor				Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.95mm
			# of Threads	Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver
	i3-8130U i5-8250U	2	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic
	i7-8550U								Smart card reader Media reader	MicroSD card reader
	Intel HD G	raphics raphics on RX xternal	s 620 or s 620 or 550 Gra I digital n	Intel UHD (Intel UHD (aphics, 2GE nonitor via	Graphics 62 Graphics 62 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 Intel SoC (ıtion: 1	1920x108	30 (HDMÍ) €	260Hz				Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /
Memory	32GB max * System clo	/ 2400	MHz DD	R4. dual-c	hannel cap	able, t	wo DDR4 S	O-DIMM sockets		dual array microphone, headphone / microphone combo jack
Display	Some: 15	.6" (39	6mm) H		88), anti-gla	are, LE	D backlight,		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Some: 15	.6" (39	6mm) Fl		1080), anti-	glare, l	LED backlig	ht, IPS,	Security chip (opt)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certific	
	None								vPro Fingerprint reader	None r Optional: Touch style fingerprint reader on the palm rest
Storage	Up to 2 drive Some: HD					able. ur	ogradable.		NFČ .	None
		tive Pro	otection S	System™	,	, -,	3 ,		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optane™ memory	Optional: 1				e NVMe, P	Cle 3.0) x 2		Max battery life	MobileMark® 2014: 12.23 hr *Battery life varies significantly with settings, usage, & other factors
	None Gigabit Eth	a rnat	Cannaat	ion Doolto	- D011101	ıc			AC adapter	45W or 65W USB Type-C AC adapter
Ememer	Gigabil Eli	iemet	Connect	ion, Realte	KHOIIIGU	15			Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
										One of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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

Lenovo August 2019

















ThinkPad E590 Platform Specifications

Processor	8th Generation Intel®	Core	™ i3 / i5 / i	7 Processo	r				Dimensions	<i>WxDxH:</i> 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm
	Processor # of # of Number Cores Three i3-8145U 2 4	ads F		Max Turbo Frequency 3.9 GHz	Cache 4MB	Memory Types		Processor Graphics	Weight Case color Case material	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;
	i5-8265U i7-8565U 4		1.6 GHz 1.8 GHz	3.9 GHz 4.6 GHz		DDR4-240	00 Intel I	UHD Graphics 620	Smart card reade Media reader	Bottom: PC/ABS plastic rNone MicroSD card reader
Graphics	Intel UHD Graphics 6 Intel UHD Graphics 6 AMD Radeon RX 550 supports external dig supports dual indepe Max resolution: 4096	20 in 0X Gra ital mo ndent 5x2304	processor aphics, 2G onitor via I display; 4@60Hz (I	and B GDDR5 HDMI or U	SB Typ	e-C;	@24Hz	(HDMI)	Ports Monitor cable Bundled Accy	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset Memory	Intel SoC (System on 32GB max / 2400MH: * Installed memory is ac	z DDŔ	Ŕ4, dual-cl	nannel cap ut run at 240	able, tv OMHz a	vo DDR4 lue to Intel	SO-DII	MM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /
Display	Size / Resolution	Туре	Surface	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)	HD (1366x768) TN Anti-glare 220 nits 16:9 400:1 90° Non-touc							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	15.6" FHD (1920x1080) None	IPS	Anti-glare	250 nits	16:9	600:1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0. TCG Certified
Storage	Up to two drives (one M. • HDD / SATA 6.0Gb/ • M.2 2280 SSD / SA • M.2 2242 SSD / PC	's, 2.5 TA 6.0 Ie NV	" wide, 7m)Gb/s 'Me, PCIe	ım high, Ad 3.0 x 2	tive Pr	otection S	System™	М	System Mgt Fingerprint reade NFC	Discrete model: firmware TPM 2.0 integrated in chipset None
Optane™ memory	 M.2 2280 SSD / PC * Installed M.2 2280 SSI y Optional: Intel Optan None 	D is PC	Cle 3x4 but l	run at PCle	<i>3x2 due</i> Cle 3.0	to M.2 SS x 2	SD adapt	er limitation	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet	Gigabit Ethernet Con	nectio	n, Realtek	R8111GL	JS				AC adapter	45W or 65W USB Type-C AC adapter
WLAN + Bluetooth™	One of the following, cor • Realtek® RTL8822B • Intel Wireless-AC 92	BĔ, Wi	i-Fi 2x2 80	2.11ac + E				I	Operating system Limited warranty	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model: • 1-year mail-in repair service
WWAN SIM card	None None								1	1-year depot repair service 1-year 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.













ThinkPad E595 Platform Specifications

Processor	AMD Ryz	en™ Mo	obile Pro	ocessors wi	th Radeon	' Vega G	araphics			Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.9mm		
	Processor Number		# of	Base Frequency	Max Turbo	Cache	Memo		Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1 kg Black		
	Ryzen 3			· ·		1MB L2			Radeon Vega 3	Case material	Display cover: Aluminum;		
	3200U	2	4	2.6 GHz	3.5 GHz	4MB L3			Graphics		Bottom: PC/ABS plastic		
	Ryzen 5 3500U	4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2	400 F	Radeon Vega 8 Graphics	Smart card reade Media reader	rNone MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On),		
	Ryzen 7 3700U			2.3 GHz	4.0 GHz	2MB L2 / 4MB L3	/	R	ladeon RX Vega 10 Graphics	Ports	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,		
Graphics	supports of	externa dual in	aľ digital depend	ega 8, or R monitor via ent display; 160@60Hz	HDMI or I	JSB Typ	e-C;			Monitor cable Bundled Accy	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical spee None None		
Chipset Memory	AMD SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation									Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
Display	Size / Reso	Size / Resolution		/pe Surface		Ratio	Contrast Ratio	Viewir Angle		 Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
	15.6" HD (ΓN Anti-gla		16:9	400:1	90°	Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole		
		15.6" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 600:1 170° Non-touch					600:1	170°	Non-touch	Security chip Discrete TPM 2.0, TCG Certified			
Multi-touch	None	d-1: /-	140	200	//DD\					Fingerprint reader	one one		
Storage	HDD / SM.2 224	SATA 6 2 SSD	.0Gb/s, 2) / PCle	SSD and one 2.5" wide, 7 NVMe, PC NVMe, PC	mm high, <i>l</i> e 3.0 x 2 o	Active Pr r PCIe 3	otection S .0 x 4	Systen	m™	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 10.3 hr		
Optical	None									_ ′	* Battery life varies significantly with settings, usage, & other factors		
Ethernet				ction, Realt		iUS				AC adapter	45W or 65W USB Type-C AC adapter		
WLAN + Bluetooth™				nfigurable b		ы.		•		Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
				Wi-Fi 2x2 8), Wi-Fi 2x2						Limited warranty	One of the following, configurable by model: 1-year mail-in repair service		
WWAN SIM card	None None										1-year depot repair service 1-year 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.















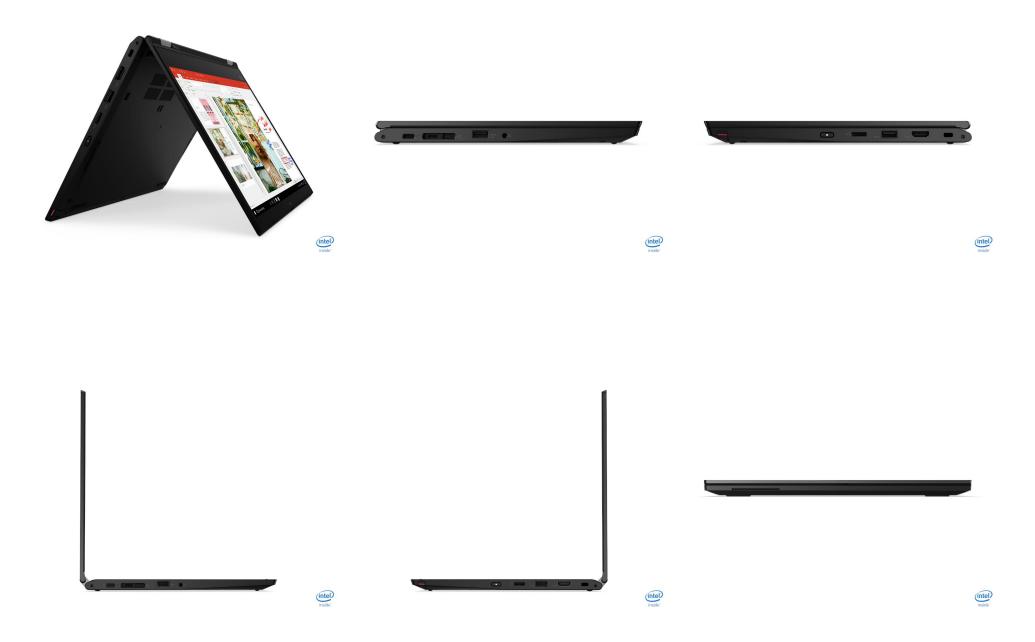




ThinkPad L13 Platform Specifications

Processor 10th Generation Intel® Core™ i3 / i5 / i7 Processor									Smart card reader Optional: Smart card reader			
	Proces Number i3-101 i5-102 i7-105	er Cores 1 10U 2 10U 4		requency I 2.1 GHz 1.6 GHz	ncy Frequency Cache Types Graphics Hz 4.1 GHz 4MB Hz 4.2 GHz 6MB DDR4-2666 Intel UHD Graphics Forts Iwo USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Deli HDMI 1.4b, Ethernet extension connector, headphone / microSD card reader, side dock security keyhole **December of the properties of the properti				Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole			
Graphics	suppo suppo	rts three ind	digital mo lependen	nitor via H displays;	IDMI or USB JSB Type-C)	• •	C; <2160@30Hz (HE	OMI)	Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo USB-C to VGA Adapter • Lenovo USB-C to HDMI Adapter • Lenovo USB-C to DisplayPort Adapter • Lenovo HDMI to VGA Monitor Adapter		
Chipset Memory		SoC (System 8GB, or 16G			4 / soldered t	o syste	emboard, no sock	ets	Bundled Accessories	Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m		
Display	Size	Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	(optional)	Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2		
	13.3"	HD (1366x768	8) TN	Anti-glare	250 nits	16:9	500:1	90°	Camera	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus		
		FHD (1920x1)		Anti-glare	(multi-touch)	16:9	800:1 (non-touch) 700:1 (multi-touch)		Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack		
			•		ture (FHD or	ıly)			 Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight		
Storage		the following, 2242 SSD /							UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch		
Optical Ethernet	M.2Intel M.2None	2280 SSD / I Optane™ N 2280, PCle	PCIe NV Nemory H NVMe 3.	Me, PCIe 10 with Sc 0 x 4	3.0 x 4 olid State Sto		10 LM (+Pro)		Security Security chip System Mgt (opt) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest None		
Ememer	RJ45	connector vi	ia optiona	I ThinkPac	d Ethernet Ex	tension	19-LM (<i>vPro</i>), n Adapter Gen 2 o	or	Battery Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in with 65W AC adapter			
WLAN + Bluetooth™	 Intel 		C 9560, W	/i-Fi 2x2 [*] 80			5.0, M.2 card		Max battery life AC adapter	MobileMark® 2014: 14.1 hr *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter		
WWAN		T available u			Tax + Diuck	JOH 3.0	, W.2 Gara		Operating system (optional)	Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode		
SIM card	None								Limited warranty	1-year depot repair service		
Dimensions Weight Case color Case material	WxDxH: 12.26" x 8.62" x 0.69"; 311.5mm x 219mm x 17.6mm Starting at 3.06 lb / 1.38 kg Black or Silver Display cover: Aluminum Bottom: GFRP								(optional)	 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 		
									Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
Note: The specification	ations a	bove may no	t be availa	ıble in all re	egions.				1	Lenovo		

December 2019



ThinkPad L13 Yoga Platform Specifications

	Total Generation intel Core	™ i3 / i5 / i7 Processor					Smart card reader Optional: Smart card reader			
	i3-10110U 2 4 2 i5-10210U 4 8 1	2.1 GHz	MB	Memory Types DR4-2666 Ir	Processo Graphic	s		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), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole		
	Intel UHD Graphics in proce supports external digital mor supports three independent Max resolution: 4096x2304	nitor via HDMI or USB displays:	•	•)Hz (HDMI))	Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo USB-C to VGA Adapter • Lenovo USB-C to HDMI Adapter • Lenovo USB-C to DisplayPort Adapter • Lenovo HDMI to VGA Monitor Adapter		
Chipset Memory	Intel SoC (System on Chip) 4GB, 8GB, or 16GB / 2666M	platform /IHz DDR4 / soldered t	o syste	emboard, r	no sockets		Bundled Accessories	 Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m 		
Display	Size Resolution Type	Surface Brightness	Aspect Ratio	Contrast Ratio		ewing Angle		 Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2 		
	13.3" FHD (1920x1080) IPS	Anti- reflection 300 nits	16:9	800:1		170°	Camera	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus 		
Hinge Convert-mode	Capacitive-type multi-touch, could reduce the brightness Yoga hinge, 360 degree Laptop, tent, stand and table ThinkPad Pen Pro, active pe	by up to 10%			, ,		Audio support	World facing camera, 5MP resolution, auto focus (selectable for fingerprint model only) HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack		
Storage	One of the following, configurable	le by model:	ay, OH-D	Joanu Tech	largeable		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch		
:	 M.2 2242 SSD / PCIe NVM M.2 2280 SSD / PCIe NVM Intel Optane™ Memory H1 M.2 2280, PCIe NVMe 3.0 None 	Me, PCIe 3.0 x 4 I0 with Solid State Sto	rage,				System Mat (ont)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest None		
	Native Intel Ethernet Connec RJ45 connector via optional Lenovo USB-C to Ethernet A	ThinkPad Ethernet Ex					Battery Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 8 with 65W AC adapter	Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
WLAN + Bluetooth™	One of the following, configured intel Wireless-AC 9560, William Intel Wi-Fi 6 AX201, Wi-Fi 2	urable by model: i-Fi 2x2 802.11ac + Bli	uetooth	5.0, M.2 (card		Max battery life AC adapter	MobileMark® 2014: 12.23 hr * Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter		
WWAN	(NOT available until May 20 None	020)	0011 3.0	, IVI.Z Carc			Light sensor G-sensor Gyroscope	None Yes None		
Dimensions Weight	None WxDxH: 12.26" x 8.62" x 0 Starting at 3.17lb / 1.43kg	0.69"; 311.5mm x 219	mm x 1	7.6mm			(optional)	Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode		
Case material	Black or Silver Display cover: Magnesium / Bottom: GFRP	/ Aluminum					(optional)	1-year depot repair service 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service		
							Mil-Spec test	MIL-STD-810G military testing		
		ble in all regions.					Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant Lenovo		





ThinkPad L380 Platform Specifications

Processor	Intel® Celeron® P	rocesso	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions	WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm	
	Processor # of Number Cores	# of Threads	Base Frequency	Max Turbo	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 3.22 lb / 1.46 kg Black or Silver	
	Cel 3965U	2	2.2 GHz	-	2MB	Types	Intel HD Graphics 610	Case material	Display cover: Aluminum Bottom: GFRP	
	i3-7020U 2		2.3 GHz	-		DDR4-2133		Smart card reade	erNone MicroSD card reader	
	i3-7130U i5-7200U	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB 3MB		620	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),	
	8th Generation Ir	ntel Core							HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack,	
	Processor # of Number Cores	# of Threads	Base Frequency	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	
	i3-8130U 2 i5-8250U	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics	(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	
	i5-8350U 4 i7-8550U	8	1.7 GHz 1.8 GHz	3.6 GHz 4.0 GHz	6MB 8MB	DDN4-2400	620	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable	
Graphics	Intel HD Graphics supports externa supports three in	l digital r depende	20 or Intel l monitor via ent displays	JHD Graph HDMI or U S:	nics 620 SB Typ	e-C ['] ;	,	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 resolution: 4	4096x23	04@60Hz	(USB Type-	-C); 40	96x2160@3	30Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
Chipset Memory	Intel SoC (Syster 32GB max / 2400 * System clocks do	DMHz DI	ÒŔ4, dual-d	channel car	oable, t	wo DDR4 S roller	O-DIMM sockets	Security Security chip vPro (optional) Fingerprint reader Optional: NEC (optional) NEC (optional) NEC (optional) Near Field Communication		
Display	Some: 13.3" (33	, 16:9 as 38mm) F	pect ratio, 5 HD (1920x	500:1 contr :1080), anti	ast rati -glare,	0	ght, IPS,		Optional: Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology	
Multi-touch (opt)	on-cell touch, sur	oports 10	0-finger ges	sture				Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)	
Storage	One of the followingM.2 SSD / SATM.2 SSD / PCI	A 6.0Gb	/s (e.g. xxx	GB SSD M	.2)	xxGB SSD	M 2 PCIe NVMe)	with 65W AC adapter Max battery life		
Optical	None		, 1 010 0.0 7	. 1, 02 00/0	, (o.g. x	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		AC adapter	45W or 65W USB Type-C AC adapter	
Ethernet	Native Intel Ether					r I219-LM (<i>v</i>	/Pro)	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty • 1-year depot repair service		
WLAN + Bluetooth™	11ac, Wi-Fi 1x1 Intel Dual Band * Intel 8265ac card	802.11a Wireles	ac + Blueto s-AC 8265,	oth 4.1, M.: Wi-Fi 2x2	2 card 802.11		oth 4.1, M.2 card	(optional)	 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 	
WWAN SIM card	None								 3-ýear/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 	
SIIVI CATO	None							Mil-Spec test	MIL-STD-810G military testing	
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	

February 2020











ThinkPad L380 Yoga Platform Specifications

Processor	7th Genera	ation Ir	ntel® Core	e™ i3 / i5 P	rocessor				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 Display cover: Aluminum	
	Number	Cores	Threads		Frequency		Types	Graphics	Case material		
	i3-7020U	i3-70200 i3-7130U 2	4	2.3 GHz 2.7 GHz	-	3MB 3MB] DDR4-2133	Intel HD Graphics		Bottom: GFRP	
	i5-7200U			2.7 GHz 2.5 GHz	3.1 GHz	3MB	DDN4-2133	620	Smart card reade		
								<u> </u>	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),	
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack,	
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB	.урос	Grapinos		microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed	
	i5-8250U			1.6 GHz	3.4 GHz	6MB	DDD4 0400	Intel UHD Graphics	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter	
	i5-8350U	4	8	1.7 GHz	3.6 GHz	6MB	DDR4-2400	620	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter	
	i7-8550U			1.8 GHz	4.0 GHz	8MB				USB-C to DP: Lenovo USB-C to DisplayPort Adapter	
Graphics	Intel HD G	raphic	s 620 or	Intel UHD	Graphics 6	20 in pi	rocessor:		Camera	720p: HD720p resolution, low light sensitive, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus	
	supports e	xterna	l digital n	nonitor via	HDMI or U	SB Typ	e-C;		1	World facing: Rear camera, 5MP resolution, auto focus	
	supports the					C): 40	റെ വേട്ടെ	30H- (HDMI)	Audio support	HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2W x 2	
Object	Máx resolution: 4096x2304@60Hź (USB Type-C); 4096x2160@30Hz (HDMI) Intel SoC (System on Chip) platform							SUNZ (NDIVII)		dual array microphone, headphone / microphone combo jack	
Chipset Memory	Up to 32G					nel cana	able		Keyboard UltraNav™	6-row, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
Momory	two DDR4	SO-D	IMM sock	kets (•	,				
	* System o	clocks	down for	processors	s with lowe	r memo	ry controlle	er	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified	
Display	13.3" (338								System Mgt (opt)	Intel vPro Technology	
Multi-touch (opt)	Capacitive							nti-reflection)	Fingerprint reade	er Optional: Touch style fingerprint reader on the keyboard bezel,	
Hinge	Yoga hinge	e, 360	degree	ii, Air (air	i i ciicciioni	,, supp	onto no ning	or gesture	anti-spoofing technology NFC <i>(optional)</i> Near Field Communication		
Convert-mode	Laptop, ter	nt, star	nd, yoga	and tablet					Battery	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)	
Pen	ThinkPad					spiay, c	n-board ga	rage	Battery	with 65W USB Type-C AC adapter	
Storage	One of the fM.2 SSE					2)			Max battery life	MobileMark® 2014: 12.85 hrs	
	• M.2 SSE) / BCI	e NVMe.	PCle 3.0 x	(4. 32Gb/s	. <i>_)</i> : (e.a. x	xxGB SSD	M.2 PCIe NVMe)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	
Optical	None		,	. 0.0 0.0 /	, 0_0.0/0	(0.9.7.			Preload	Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
Ethernet	Native Inte						· I219-LM (1	/Pro))		. '	
-	via optional ThinkPad Ethernet Extension Cable								Limited warranty	One of the following, configurable by model: • 1-year depot repair service	
WLAN +	• 11ac, Wi									1-year depot repair service 1-year depot with 2-year system board service	
Bluetooth™	 Intel Dua * Intel 8265 							oth 4.1, M.2 card		1-year + 2-year depot repair service	
WWAN	None	as ouru	сарроно	Dat 10					1	 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 	
SIM card	None									3-year/1-yr battery limited onsite service	
									Mil-Spec test	MIL-STD-810G military testing	
									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant	
										Lenovo	















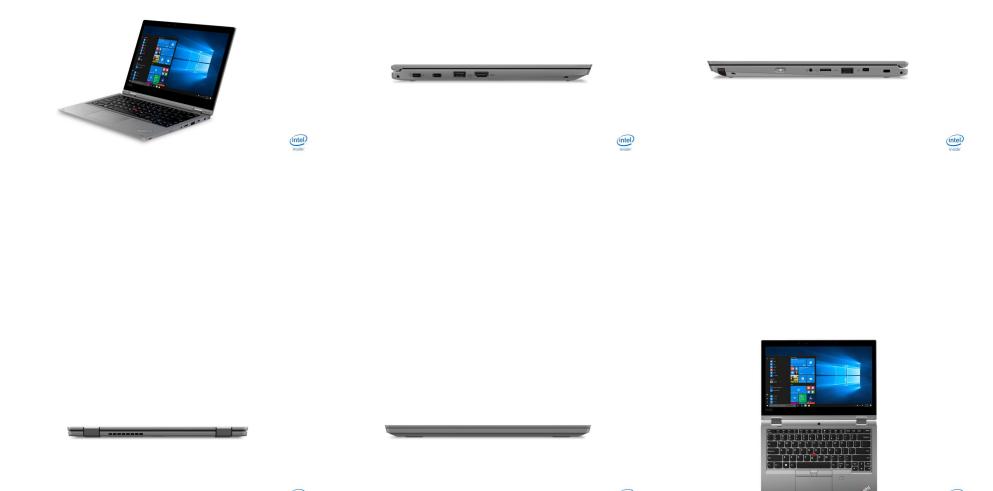






ThinkPad L390 Platform Specifications

Processor	Intel® Cel	eron® P	rocesso	or or 8th	Generation	ntel Cor	e™ i3 / i5 / i7	Process	or	Smart card reade	
	Processor Number	# of Cores	# of Threads	Base Freque	Max Turb		Memory Types	Proce Grap	essor ohics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	Cel 4305U	2	2	2.2 GH	z -	2MB	DDR4-2133	Intel UHD 61	Graphics		two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole
	i3-8145U	2	4	2.1 GH	_						* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i5-8265U	4	8	1.6 GH			DDR4-2400			Monitor cable	USB-C to VGA Adapter: Lenovo USB-Ć to VGA Adapter
	i5-8365U i7-8565U	4	8	1.6 GH			_	62	20	(optional)	USB-C to VGA (plus Power) Adapter: Lenovo USB-C to VGA plus Power Adapter USB-C to HDMI Adapter: Lenovo USB-C to HDMI Adapter
Graphics	Intel UHD supports supports	Intel UHD Graphics 610 or 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM soc						30Hz (HD	OMI)	Bundled Accessories (optional)	USB-C to HDMI (plus Power) Adapter: Lenovo USB-C to HDMI plus Power Adapter USB-C to DisplayPort Adapter: Lenovo USB-C to DisplayPort Adapter USB-C to Ethernet Adapter: Lenovo USB-C to Ethernet Adapter USB-C to USB-A Adapter: Lenovo USB-C to USB-A Adapter USB-C to USB-C Cable 2m: Lenovo USB-C to USB-C Cable 2m
Chipset Memory Display	32GB ma	x / 2400	0MHz D	DŔ4, du	al-channel c	400MHz	due to Intel lin			Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone. headphone / microphone combo iack
Display							Contras		Viewing Angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
							700:1 (no		90°	Security	Power-on password, hard disk password, supervisor password, security keyhole
	13.3" FHE	(1920x	1080) A	nti-glare	IPS 250 ni	s 16:9	800:1 (mu		170°	Security chip	Discrete TPM 2.0, TCG Certified
Multi-touch (opt) Storage	On-cell to		• •		gesture (FF	D only)				Fingerprint reader	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
	 M.2 228 M.2 224 M.2 228 Intel Op M.2 228 	80 SSD 12 SSD 80 SSD tane™	/ SATA / PCle / PCle Memory	6.0Gb/s NVMe, F NVMe, F / H10 wi	Cle 3.0 x 2 Cle 3.0 x 4 h Solid Stat	e Storag	Э,			Battery Max battery life AC adapter	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 14.61 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optical	None						10101111			Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Native Int via option Lenovo U	al Thinl	kPad Et	hernet E	ktension Ca	- <i>vPro</i>) o ble or	r I219-LM (เ	(Pro)		Limited warranty	1-year depot repair service
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service
WWAN SIM card	None None									Mil Occasion	3-year/1-yr battery limited onsite service
Dimensions Weight Case color Case material		t 3.22 II Silver over: A	b / 1.46	kg	; 321.8mm >	224.2m	m x 18.8mm	1		Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad L390 Yoga Platform Specifications

Processor	8th Ger	nerat	tion Ir	ntel® Cor	e™ i3 / i5 /	i7 Process	or				Smart card reade	
	Process Number	r	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Proce Grap		Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i3-8145	U	4	4 8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB	DDR4-2400	Intel UHD		8	HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole
	i5-8365	-	4	8	1.6 GHz 1.8 GHz	4.1 GHz 4.6 GHz	6MB 8MB	55111 2 100	62	20	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed • Lenovo USB-C to VGA Adapter
Graphics	suppor	ts ex ts thi	terna ree in	ıl digital r ıdepende	ent displays	HDMI or U	,,	•	30Hz (HD	MI)	(optional) Bundled	 Lenovo USB-C to VGA plus Power Adapter Lenovo USB-C to HDMI Adapter Lenovo USB-C to HDMI plus Power Adapter Lenovo USB-C to DisplayPort Adapter Lenovo USB-C to Ethernet Adapter
Chipset Memory	32GB r	nax /	/ 2400	DMHz DE		channel cap				sockets	Accessories (optional)	Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m
Display		Resolu			pe Surface		1000	ect Contras		Viewing Angle	Camera	One of the following, configurable by model: • HD720p camera, fixed focus • IR camera and HD720p camera, fixed focus (black model only)
	13.3" F	FHD (1920x1080) IPS Anti- reflection 300 nits 16:9 800:1 72%								170°	Audio support	World facing camera, 5MP resolution, auto focus (mutually exclusive with fingerprint reader) HD Audio, Realtek ALC3287 codec /
Multi-touch Hinge	could re	apacitive-type multi-touch, supports 10-finger gesture, anti-reflection (audi reduce the brightness by up to 10% ga hinge, 360 degree										stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Multi-mode Pen <i>(optional)</i>	Laptop,	, tent	t, star	nd and ta		ılti-touch di	splay, o	n-board ga	rage		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Storage	M.2 2M.2 2M.2 2Intel 0	2280 2242 2280 Opta	SSD SSD SSD ne™ l	/ SATA 6 / PCIe N / PCIe N Memory	IVMe, PCI IVMe, PCI H10 with S	e 3.0 x 2	Storage	·,				Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology or Optional: Touch style fingerprint reader on the palm rest (mutually exclusive with World facing camera) Near Field Communication
Optical	None	2280	, PCIE	e NVMé	3.0 X 4						Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet	via opti	onal	Think	kPad Eth	ernet Exte	9-V (<i>Non-v</i> nsion Cable	<i>Pro</i>) or or	I219-LM (vPro)		Max battery life	with 65W AC adapter MobileMark® 2014: 12.17 hr * Battery life varies significantly with settings, usage, & other factors
WLAN					et Adapter Vi-Fi 2x2 80)2.11ac + E	luetoot	h 5.0. M.2	card		AC adapter	45W or 65W USB-Č AC adapter
Bluetooth™	Bluetoc											n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WWAN SIM card	None None	lone									Limited warranty	 1-year depot repair service 1-year depot with 2-year system board repair service
Dimensions Weight	Starting	g at 3	3.44 II	" x 8.83" bs / 1.56	x 0.74"; 32 kg	21.8mm x 2	24.2mr	n x 18.8mn	n			 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
Case color Case material	Display	Black or Silver Display cover: Magnesium / Aluminum									Mil-Spec test	MIL-STD-810G military testing
	Bottom		G	3FŘP							Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

December 2019



ThinkPad L480 Platform Specifications

Processor	Intel® Cele	eron® F	Processor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor	# of	_ # of	Base	Max Turbo	Cache	Memory	Processor	1	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE,
	Number	Cores	Threads	Frequency	Frequency		Types	Graphics Intel HD Graphics	-	Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)
	Cel 3965U		2	2.2 GHz	-	2MB		610		 Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card
	i3-7020U	2		2.3 GHz	-	3MB	DDR4-2133			* For non-WWAN model, it means the model is NOT WWAN upgradable
	i3-7130U	-	4	2.7 GHz 2.5 GHz	- 0.1.011=	3MB 3MB		Intel HD Graphics 620	I——————	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U i5-7300U	1		2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB		020	Dimensions Weight	WxDxH: 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm Starting at 3.71 lb / 1.68 kg
		ation I	ntel Core	i3 / i5 / i7		ONE		L	Case color	Black
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Case material	PC/ABS plastic
	Number	Cores	Threads	Frequency	Frequency	Cacne	Types	Graphics	Smart card reade Media reader	er <i>Optional:</i> Smart card reader MicroSD card reader
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB			Ports	Two USB 3.1 Gen 1 (one Always On),
	i5-8250U	┨ .		1.6 GHz	3.4 GHz	6MB	DDR4-2400	Intel UHD Graphics	1 0110	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i5-8350U i7-8550U	4	8	1.7 GHz 1.8 GHz	3.6 GHz 4.0 GHz	6MB 8MB		620		HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
		ic NOT	available i	n US and El		OIVID			-	headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole
Graphics						hioo 60	0 in process	or only or	∤.	* Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics	Intel HD G	arapriic	s 610 / 6	Intel UHD	Graphics 6	20 in bi	rocessor an	d	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	AMD Rad	eon 53	30, 2GB (BDDR5 me	mory	•			1-7	I) One of the following, configurable by model:
				available	in EMEA); HDMI or U	SR Tvn	۵-۲۰		Carriera (optional)	HD720p camera, fixed focus
	supports t	hree ir	ndepende	ent displays	;				Aali a. aa.a.ut	IR camera and HD720p camera, fixed focus
	Max resol	ution:	4096x23	04@60Hź	ÚSB Type	·C); 409	96x2160@3	0Hz (HDMI)	Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /
Chipset	Intel SoC	(Syste	m on Chi	p) platform						dual array microphone, headphone / microphone combo jack
Memory	32GB max * System cl	x / 240 locks do	OMHz DE own for pro	DR4, dual-o cessors with	channel cap of lower mem	oable, tv ory conti	wo DDR4 S roller	O-DIMM sockets	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display							D backlight,		Security	Power-on password, hard disk password, supervisor password, security keyhole
	22 Some: 14	20 nits, 1 n" (3)	16:9 asp	ect ratio, 5	00:1 contra	ast ratio	ı ₋ED backlig	ht IDS	Security chip	Discrete TPM 2.0, TCG Certified
	25	50 nits,	16:9 asp	ect ratio, 8	00:1 contra	ast ratio	, 170° viewi	ng angle	vPro (optional)	Intel vPro Technology
Multi-touch (opt)	On-cell to		<u> </u>						Fingerprint reade	r Optional: Touch style match on chip fingerprint reader on the keyboard bezel, anti-spoofing technology
Storage					30 slot exclus				NFC (optional)	Near Field Communication
							tive Protect g. xxxGB SS	ion System™	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: M	1.2 SSI	D / PCle I	NVMe, PCI	e 3.0 x 2, 1	6Gb/s	-	,	'	with 65W AC adapter
	Some: 12	28GB I	M.2 SSD	/ PCIe NVI	Me, PCIe 3	.0 x 2,			Max battery life	MobileMark® 2014: 12.2 hr * Battery life varies significantly with settings, usage, & other factors
Optical	None In	VVVVA	IN SIOT AS	2nd Storag	je, mutuali	exclus	sive with WV	VAN	AC adapter	45W or 65W USB Type-C AC adapter
Ethernet							cksonville)			n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	vPro mod					9-LM (Jacksonvilĺe)	Limited warranty	One of the following, configurable by model:
WLAN +				rable by mod					(optional)	 1-year depot repair service 3-year/1-yr battery depot repair service
Bluetooth™ (optional)	Healtek® Intel Dua	" HTL8 al Band	822BE, V d Wireles	VI-FI 2x2 8 s-AC 8265	U2.11ac + I Wi-Fi クxク	31uetoo 802.11	tn 4.1, M.2 (ac + Blueto	card (US only) oth 4.1. M.2 card		3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
(reless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card ports BT4.2 but is limited to BT4.1 by Windows OS				, . oara	Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specific	- ti - u l			المصنامات						Lenovo



ThinkPad L490 Platform Specifications

Processor	Intel® Cele	eron® F	rocesso	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	7 Proce	ssor	Dimensions	<i>WxDxH:</i> 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types		ocessor raphics	Weight Case color Case material	Starting at 3.72 lb / 1.69 kg Black PC/ABS plastic
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133	Intel U	HD Graphics 610	Smart card reade	r <i>Optional:</i> Smart card reader
	i3-8145U i5-8265U	2	8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB				Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	Intel U	HD Graphics 620		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),
	i7-8565U i7-8665U	4	8	1.8 GHz 1.9 GHz	4.6 GHz 4.8 GHz	8MB 8MB					HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Graphics	Intel UHD (discrete r supports e supports t	Graph nodels externa hree in	nics 620 in are NOT al digital r ndepende	available i monitor via ent displays	and AMD n EMEA); HDMI or U ;	Radec SB Typ			·	Monitor cable (optional) Bundled Accy	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed # DMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None One of the following, configurable by model:
Chipset Memory	Intel SoC 64GB max * Installed r	(Syste k / 240 memory	m on Chi 0MHz D[· is actually	p) platform DR4, dual-c / 2666MHz b	hannel cap ut run at 213	able, t	wo DDR4 S or 2400MHz o	O-DIM	M sockets tel limitation	1 ''	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec /
Display		Resolution Type Surface Brightness Ratio Ratio Gamut					o Ratio	Gamı	ut Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	14.0" HD (14.0" FHD			N Anti-glare		16:9		45% 45%		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
			<u> </u>	0-finger 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 Pi	rotection Sy	stem™		System Mgt (opt) Fingerprint reader	Intel vPro Technology r <i>Optional:</i> Touch style fingerprint reader on the palm rest Near Field Communication
Optane™ memory Optical	* Installed I	N.2 228	0 SSD is I	PCIe 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 AC adapter MobileMark® 2014: 12 hr
Ethernet				nernet Conr			cksonville) Jacksonville	<i>i</i>)		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	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card (NOT available in EMEA) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 								Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service
WWAN (optional)	 Wireless 	WAN:	upgradal	ble (special	bid only in		i))-EB, M.2 ca	ard (EM	1ΕΑ only)		 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service
	• Integrate * For non-V	ed Mob	ile Broad	band 4G L	ΓΕ-Α, Fibo	com L8	350-GL, M.2 Spgradable	card	,/	Mil-Spec test	MIL-STD-810G military testing
SIM card Note: The specifica	None									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant Lenov



ThinkPad L580 Platform Specifications

Processor	Intel® Cele	eron® F	Processor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		 Wireless WAN upgradable (special bid only) 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		Intel XMM™ 7260 (Fibocom L850-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	SIM card (opt)	* For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U i5-7300U		4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB		620	Dimensions Weight	WxDxH: 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm Starting at 4.46 lb / 2.0 kg
	8th Gener	ation I	ntel Core	i3 / i5 / i7 F	Processor				Case color Case material	Black PC/ABS plastic
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	ExpressCard	None
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB			Modia roador	er Optional: Smart card reader MicroSD card reader
	i5-8250U i5-8350U	4	8	1.6 GHz 1.7 GHz	3.4 GHz 3.6 GHz	6MB	DDR4-2400	Intel UHD Graphics 620	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i7-8550U	i- NOT	! - -	1.8 GHz	4.0 GHz	8MB			<u> </u>	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Graphics	Intel HD G Intel HD G AMD Rade	130U is NOT available in US and EMEA HD Graphics 610, 620 or Intel UHD Graphics 620 in processor only of the Graphics 620 or Intel UHD Graphics 620 in processor and Radeon 530, 2GB GDDR5 memory rete models are NOT available in EMEA); orts external digital monitor via HDMI or USB Type-C;							Monitor cable (optional)	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	supports e supports t Max resolu	externa hree ir ution:	al digital n ndepende 4096x230	nonitor via ent displays 04@60Hz (HDMI or Û: ; (USB Type-	,,	•	BOHz (HDMI)	Camera (optional 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
Chipset Memory	32GB max	k/240	OMHz DE	p) platform DR4, dual-c cessors with	hannel cap	able, to	wo DDR4 S roller	O-DIMM sockets	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	22 Some: 15 25	20 nits, 5.6" (39	16:9 asp 96mm) Fl	ect ratio, 5 HD (1920x1	00:1 contra 1080), anti-	st ratio glare, L	D backlight, ED backlig 170° view	ht, IPS,	Security Security chip vPro <i>(optional)</i> Fingerprint reade	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,
Multi-touch	None								NFC (optional)	anti-spoofing technology Near Field Communication
Storage	Some: HI Some: SS Some: M Some: 12	DD / S SD / S .2 SSE 28GB N	ATA 6.0G ATA 6.0G D / PCle N M.2 SSD	ib/s, 2.5" w NVMe, PCI / PCIe NVI	ide, 7mm h ide, 7mm h e 3.0 x 2, 1 Me, PCIe 3.	igh, Ad igh (e.g 6Gb/s .0 x 2,	ctive Protect g. xxxGB SS	ŕ	Battery Max battery life AC adapter	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 12 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optical	None	****	i v olot do	Zna Otorag	jo, mataany	CXOIGC	ore with www	*/ !! *	Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Non-vPro vPro mode			nernet Coni nernet Coni			cksonville) Jacksonville)	Limited warranty	One of the following, configurable by model: 1-year depot repair service
WLAN + Bluetooth™ (optional)	 Realtek® Intel Dua 	of the following, configurable by model: ealtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US o tel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.3 el 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS					ac + Blueto			 1-year depot with 2-year system board repair service 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
Note: The specific									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant



ThinkPad L590 Platform Specifications

Processor	Intel® Cele	eron® F	rocesso	r or 8th Gei	neration Int	el Core	e™ i3 / i5 / i7	7 Processor	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	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color Case material	Starting at 4.48 lb / 2.03 kg Black PC/ABS plastic
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133	Intel UHD Graphics 610	Smart card reade	r <i>Optional:</i> Smart card reader
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB			Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8265U i5-8365U	4	8	1.6 GHz 1.6 GHz	3.9 GHz 4.1 GHz	6MB 6MB	DDR4-2400	Intel UHD Graphics	. 5.15	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort).
	i7-8565U	4	8	1.8 GHz	4.6 GHz	8MB	DDI 14-2400	620		one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
	i7-8665U	4	8	1.9 GHz	4.8 GHz	8MB				headphone / microphone combo jack, optional smart card reader.
Graphics	Intel UHD (discrete r supports e supports t	Graph nodels externa hree in	iics 620 i are NOT al digital r ndepende	Γ available i monitor via ent displays	r and AMD n EMEA); HDMI or U ;	Ŕaded SB Typ	e-C;	GDDR5 memory	(optional) Bundled Accy	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None
Chipset Memory	Intel SoC 64GB max	(Syster	m on Chi	ip) platform	hannel car	able. t	wo DDR4 S	O-DIMM sockets		 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 /
Display	Size Reso			rpe Surface		Aona	ct Contrast		Thudio support	stereo speakers, 2W x 2, Dolby® Advanced Audio / optional dual array microphone, headphone / microphone combo jack
	15.6" HD (15.6" FHD			N Anti-glar			_	45% 90° 45% 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 (opt)	On-cell to	uch, su	ipports 1	0-finger ge	sture (FHD	only)	·		Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage	SSD / SM.2 228	ATA 6.0 0 SSD	0Gb/s, 2 / PCle N	.5" wide, 7r .5" wide, 7r NVMe, PCI NVMe, PCI	nm high e 3.0 x 4	ctive P	rotection Sy	stem™	Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
Optane™ memory Optical	* Installed N	1.2 228	0 SSD is I	PCIe 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 AC adapter MobileMark® 2014: 12 hr
Ethernet	Non-vPro vPro mode		: Intel Eth Intel Eth	nernet Coni	nection I21	9-V (Ja 9-LM (icksonville) Jacksonville)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
WLAN +			g, configu	rable by mod	el:			-		Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (optional)	(NOT av	ailable eless- <i>F</i>	in EMÉ AC 9260,		302.11ac +	Blueto	oth 5.0 5.0	card	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service
WWAN (optional)	WirelessIntegrate	WAN d Mob	upgrada	ble (special dband 4G L	bid only in TE, Fiboco	m L830	Ó-EB, M.2 ca	ard (EMEA only) card		 1-year + 2-year depot repair service 1-year + 2-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
SIM card	 Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable None 					VWAN ι	ıpgradable		Mil-Spec test	MIL-STD-810G military testing
Note: The specifica									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant Lenov



ThinkPad P1 Platform Specifications

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

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

Lenovo November 2019













ThinkPad P1 (2nd Gen) Platform Specifications

Processor	9th G	enera	tion Ir	ntel® Coi	e™ i5 /	/ i7 / i9 F	Processo	r or In	itel Xe	on® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Proces		# of Cores	# of Threads			lax Turbo requency	Cache		mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg;
	i5-940		4	8	+ -		4.3 GHz	8MB			оа.р.		Case color	Multi-touch model: starting at 4.0 lb / 1.81 kg Black paint (FHD model) or black weave (UHD model)
	i7-975	60H	6	12	2.6		4.5 GHz	12MB		In	tel UHD (Graphics	Case color Case material	Display cover: CFRP/GFRP hybrid;
	i7-985		6	12	+		4.6 GHz	12MB		4-2666	630	0		Bottom: Aluminum alloy
	i9-988	OH	8	16	2.3	GHz 4	4.8 GHz	16MB		_				er Optional: Smart card reader
	E-227	6M	6	12	2.8	GHz 4	4.7 GHz	12MB	1	In	tel UHD (P63		Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
Graphics	Intel U NVIDI suppo suppo	JHD @ IA® Qu orts ex orts fo	araph ladro terna ur ind	T1000 I digital ependei	or P63 or T20 monito nt disp	30 in pro 000, 4G or via HI olays;	only or ocessor a B GDDR DMI or TI olt); 4K@	5 mer nunde	rboĺt [™] ;				Monitor cable (optional)	(with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Chipset	Mobile	e Intel	CM2	46 Chip	set]` ′ ′	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
Memory	64GB	max	/ 2666	3MHz D	DR4, I	ECC or	non-ECC	(ECC	C func	tion sup	oorted o	nly on	Bundled Accy	
D: 1	xeon	proce	ssor)	, duai-cr	annei	capable	e, two DI						a ' ' '	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Display	Size	Resolu	tion		Туре	Surface	Bright		Aspect Ratio	Contrast Ratio	Gamut	Viewing Angle	Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec /
	15.6"	FHD (1	920x1	1080)	IPS	Anti-glar	e 300 r	nits	16:9	700:1	72% NTSC	170°] radio support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack,
	15.6"	FHD (1 Dolby \	920x1 √ision	I080) ™ HDR	IPS	Anti-glar	e 500 r	nits	16:9	1200:1	72% NTSC	170°		Dolby Atmos® sound system
	15.6"	UHD (3 Dolby \	3840x2 √ision	2160) HDR	IPS	Anti-glar	e 500 r	nits	16:9	1200:1	100% Adobe	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	15.6"	UHD (3 Dolby \ Multi-to	/ision		OLED	Anti- reflection / Anti- smudge	UDK 3	00nit	16:9	100000:1	100% DCI-P3	170°	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Multi-touch (opt)	Capa	citive-	type r	nulti-tou n) / AS (ch, su	ipports 1	10-finger	gestu	re (UF	HD OLEI	O only),		Color calibration	rTouch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None
Pen (optional)	Lenov	o Per	Pro	(special	bid or	nly)	ooug						Batterv	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Storage	M.2 2	280 S	SD /	PCĺė N\			1.2 2280 d	rives o	nly				Max battery life	MobileMark® 2014: 13.8 hr * Battery life varies significantly with settings, usage, & other factors
RAID (optional) Optical			uppor	t									AC adapter	135W slim tip AC adapter
Ethernet	// RAID 0/1 support None Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro)) via bundled or optional ThinkPad Ethernet Extension Cable						or I219	-LM (vF	?ro))		Operating system	One of the following, configurable by model: Windows® 10 Home 64		
MI AN (antional)										•			-	 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
								bo adapt	er		Limited warranty	One of the following, configurable by model:		
WWAN SIM card	None None													 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
													Mil-Spec test	MIL-STD-810G military testing
													Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P43s Platform Specifications

Processor	8th G	eneratio	n Intel® C	ore™	i7 Proce	ssor					Dimensions	WxDxH:		70"; 329mm x 227		
	Proces					Max Turbo	Cache	Memory	Proce		Weight	Models	FHD	FHD Low Power	WQHD	
	Numb		es Threa	_		rrequency		Types	Grap	hics	-	Weight	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg	
	i5-836		8	_	.6 GHz		6MB 8MB D	DR4-2400 In	tel UHD	Graphics	Case color Case material	Black	over: PPS / 50% GF	:.		
	i7-866		"		.9 GHz		8MB	DN4-2400	62	0	Case material	Bottom:	PA / 50% GF	,		
Graphics			nhice 62) in n	rocessor	and							Smart card reader			
Graphics	NVID	A Quadr	o® P520	2GB	GDDR5	memory;					Media reader		card reader	0>		
	suppo	rts exter	nal digita	al mo	nitor via F	HDMI or USI	B Type-	·C;			Ports	one USB	3.1 Gen 1 (one Alwa 3.1 Type-C Gen 1 (w	ith the function of Po	wer Delivery and Dis	splayPort).
	suppo Max r	rts three esolutior	: indeper i: 3840x	ident 2160	displays; @60Hz (l	JSB-C); 38-	40x216	60@30Hz (H	DMI)			one USB	3.1 Type-C Gen 2 / T	hunderbolt 3 (with the	ne function of PD and	DP),
Chipset	Intel S	SoC (Sys	tem on 0	Chip)	platform			(1	headphon	b, Ethernet (RJ-45), le / microphone com	bo jack, optional sm	art card reader.	
Memory	48GB	max / 2	400MHz	DĎŔ	4, dual-ch	nannel capa		D 4 00 DIA	48.41			microSD o	card reader, side doo	king connector, seco	urity keyhole may be lower than theor	
	* Insta	or 16GB lled memo	memory orv is actu	soide ally 26	erea to sy 666MHz bu	stemboard, ut run at 2400	one טו MHz du	e to Intel limita	IIVI SOCK ation	Ket	Monitor cable	HDMI to V	g on many tactors, actu /GA:	iai data transter speed i II to VGA Monitor Ad	<i>nay be lower than theor</i> anter	eticai speed
Display							Aspect		,	Viewing	(optional)	USB-C to	VGA: Lenovo USB	-C to VGA Adapter	apto.	
	Size	Resolution	1	Туре	Surface		Ratio	Ratio		Angle	1		HDMI: Lenovo USB DP: Lenovo USB		anter	
						250 nits (non-touch)			1		Bundled Accy	None	27. 2011010 002	o to Biopiayi oi titta	артог	
	14.0"	FHD (192	0x1080)	IPS	Anti-glare	300 nits	16:9	700:1	45%	170°	Camera (optional		following, configurable			
		FHD (192	0v1080)			(multi-touch)	1				4		camera with ThinkS		cy, fixed focus er camera privacy, fixe	ad facus
	14.0"	Low Powe		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Audio support	HD Audio,	, Realtek® ALC3287	codec /	, ,,	eu iocus
		FHD (192 ThinkPad		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°		stereo spe	eakers, 2W x 2, Dolb	y® Audio™ Premium	/ e / microphone comb	امماد
		Guard	,		Anti-giare	400 1113	10.3	1000.1	12/8	170	Keyboard		uai array iar-ileid mid Il-resistant, multimed	1 7 1		oo jack
	14.0"	WQHD (2 Dolby Visi	560x1440	IPS	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	UltraNav™	TrackPoin	t® pointing device an	d buttonless Mylar s	urface multi-touch tou	uchpad
Multi-touch (opt)	-				inger ges	ture (FHD o	nlv)		Muobo		Security				or password, security	/ keyhole
Pen	None	ii todoii,	оарроги		mgor goo	itaio (i i ib o	, y /				Security chip System Mgt (opt)		PM 2.0, TCG Certifi	ed		
Storage					drives onl	у					Fingerprint rèadé	r Optional:	Touch style match o	n chip fingerprint rea	der on the palm rest	
	M.2M.2	2280 SS	SD / SAL	4 6.00 NVN 2	Gb/s Me, PCIe	30 x 4					NFČ (optional)		d Communication			
	• M.2	2242 S	SD / PCI	IVN e	Me, PCIe	3.0 x 2					Battery Max battery life		l Li-ion 50Wh battery <i>rk® 2014:</i> 14.7 hr	, supports Rapid Ch	arge (charge up to 80	0% in 1hr)
		l Optane 2280, P				olid State St	orage,				Iviax battery life	* Battery li	fe varies significantly w		her factors	
Optical	None	2200, F	CIE INVIV	ie 3.0	7 X 4						AC adapter		W slim USB Type-C	<u> </u>		
Ethernet						ection I219-					· · · · · ·		10 Home 64 or Win			
		model:				ection I219-	· ·				Limited warranty	One of the	following, configurable lepot repair service	by model:		
WLAN Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								. .			 3-year/1 	-yr battery depot rep	air service		
					le by mode		looth C	Jilibo adapte	3 1		 	• 3-year/1	-yr battery limited or	nsite service		
WWAN (optional)						<i>n:</i> bid only in E	EMEA)				Mil-Spec test	MIL-STD-	810G military testing)		
	 Integrated Mobile Broadband 4G LTE, Fibócom L830-EB, M.2 card (EN Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card 								l (EMEA	A only)	Environment	EPEAT™ S	Silver; ENERGY STA	AR® 7.1; RoHS-comp	liant	
	• Inte	grated M on-WWA	obile Bro V <i>model. i</i>	adba t meai	and 4G LT ns the mod	E-A, Fiboco del is NOT WV	om L85 VAN upa	บ-GL, M.2 ca aradable	ard							
SIM card (opt)						LTE (US) SI										













ThinkPad P51 Platform Specifications

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













ThinkPad P52 Platform Specifications

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



ThinkPad P52s Platform Specifications

Processor	8th Genera	ation I	ntel® Cor	e™ i5 / i7 F	Processor				Dimensions	WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm		
	Processor Number i5-8350U i7-8550U	# of Cores	# of Threads	Base Frequency 1.7 GHz 1.8 GHz	Max Turbo Frequency 3.6 GHz 4.0 GHz	Cache 6MB 8MB	Memory Types DDR4-2400	Processor Graphics Intel UHD Graphics	Weight Case color Case material	starting at 4.39 lb / 1.99 kg Black Display cover: GFRP + PPS; Bottom: GFRP		
	i7-8650U	4	0	1.9 GHz	4.0 GHz 4.2 GHz	8MB	DDN4-2400	620	Smart card reade Media reader	r <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)		
Graphics	Intel UHD NVIDIA Qu supports e supports tl Max resolu	uadro® externa hree ir	P500, 20 al digital r ndepende	GB GDDR: nonitor via ent displays	5 memory; HDMI or U s;	• •		30Hz (HDMI)	Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC),		
Chipset Memory	32GB max * System clo	k / 240 ocks do	OMHz DE	cessors with	channel cap h lower mem	ory contr	roller	O-DIMM sockets	Monitor cable	side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter		
Display	Some: 15	.6" (39	6mm) Fl	HD (1920x1	1080), anti-	glare, L	ED backlig	ht, IPS, 250 nits, iewing angle	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
	Some: 15 16	.6" (39 :9 asp	6mm) UI ect ratio,	HD (3840x2 1000:1 cor	2160), anti- ntrast ratio,	glare, L 72% ga	ED backlig	ht, IPS, 300 nits, viewing angle	, , ,) One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus		
Multi-touch (opt) Pen Storage	None				esture (FHD		storage and	4	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack		
Storage	súpports sir Some: HI	ngle sid DD / S	led M.2 22 ATA 6.00	280 drives on Gb/s, 2.5" w	2 2280 slot exclusively for storage, and ss only 5" wide, 7mm high, Active Protection System™ 5" wide, 7mm high (e.g. xxxGB SSD)				Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Optane™ memory Optical	Some: M. Some: 12	.2 SSE 28GB I WWA	D / PCle I M.2 SSD N slot as	NVMe, PCI / PCIe NVI 2nd Storac	le 3.0 x 2, 1 Me, PCle 3 de, mutually	6Gb/s .0 x 2, / exclus	16Gb/s, sive with W\	,	0 1	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest anti-spoofing technology		
Ethernet	Non-vPro				nection I21 nection I21			9)	NFC (optional) Battery	Near Field Communication Optional integrated Li-ion 32Wh battery and		
WLAN +	Intel Dual	Band \	Wireless-	AC 8265, V	Ni-Fi 2x2 80)2.11ac	+ Bluetoot	th 4.1, M.2 card	Max battery life	swappable Li-ion 24Wh, 48Wh, or 72Wh battery		
Bluetooth™					limited to B7	74.1 by V	Vindows OS		(MobileMark® 2014)	Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3 hr		
WWAN (optional)	One of the fWirelessIntegrate	WAN	upgradal	ble					AC adapter	* Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter		
					EB), M.2 ca	ırd (EM	EA only)			Windows® 10 Home 64 or Windows 10 Pro 64		
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 	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable				Intel XMM™ 7360 (Fibocom L850-GL), M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable					Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year (including battery) limited onsite service
									Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant		













ThinkPad P53 Platform Specifications

Processor		1	1	_	/ i9 Proces			_			Dimensions	WxDxH (non-touch): 14.86" x 9.93" x 0.96-1.16";
	Processor Number	# of Cores				y Cache	Memory Types		Proces Graph			377.4mm x 252.3mm x 24.5-29.4mm WxDxH (multi-touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm
	i5-9400H i7-9750H	6	8 12	2.5 GHz			4	l-4-1		\	Weight	Non-touch model: starting at 5.51 lb / 2.5 kg;
	i7-9750H	6	12	2.6 GHz			1	i i	630	araphics	Case color	Multi-touch model: starting at 6.4 lb / 2.9 kg Black
	i9-9880H	8	16	2.3 GH			-IDDR4-260				Case material	Display cover: Glass-Fiber Reinforced Plastic;
	E-2276M	6	12	2.8 GH	4.7 GHz	12MB		Intel	UHD G	araphics O		Bottom: Magnesium/Aluminum er Optional: Smart card reader
Graphics	NVIDIA® C RTX 3000 RTX 5000 supports 6 supports f	Quadro (6GB (16GE externa five ind	T1000 GDDR6 GDDR digital epender	(4GB GD , VR read 6, VR rea monitor v nt displays	a HDMI or	00 (4GE 00 (8GE Thunde	GDDR6, rbolt™;	VR rea		r	ExpressCard Media reader Ports	None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole
Chipset Memory	Mobile Intel CM246 Chipset 128GB max / 2666MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets								proce	essor),	Monitor cable	* Power Delivery only supports power-out for charging peripherals * USB-C Dock is not supported in right-side USB-C port * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Display	Size Reso	lution		Type Su	face Brigh	tness A	spect Con Ratio Ra		Color	Viewing Angle		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	15.6" FHD	(1920x	1080)	IPS Anti	glare 300	nits	16:9 70	0:1 7	72%	160°	Bundled Accy	None
	15.6" FHD Dolby	(1920x ⁻ y Vision ⁻	1080) ™ HDR	IPS Anti	glare 500	nits	16:9 120	0:1 7	72%	160°	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
		(3840x) y Vision		IPS Anti	glare 500	nits	16:9 120	0:1 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 refle	nti- HDR	400nit, 500nit eak)	16:9 1000	000:1 1 D	100% CI-P3	170°	Keyboard	optional dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system 6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight
Multi-touch (opt)				ch, suppo	orts 10-fing AS) coating		re (UHD c	only),			UltraNav™	3-button Mylar surface multi-touch touchpad
Pen (optional)	Lenovo Pe				,	<u>'</u>					Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage	supports siHDD / SM.2 228* HDD is or	ngle sid SATA 6. 30 SSD nly avail	ed M.2 22 0Gb/s, 2 / PCIe I able for T	280 drives 2.5" wide, NVMe, P0 1000 and 1	7mm high, de 3.0 x 4 2000 graphi	Active F		System	ı™			Discrete TPM 2.0, TCG Certified Intel vPro Technology er Touch style match on chip fingerprint reader on the palm rest Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication
Optane™ memory RAID <i>(optional)</i> Optical	y Optional: RAID 0/1/ None	Intel O 5 supp	ptane m ort	nemory, P	Cle NVMe,	PCIe 3.	.0 x 2					Integrated Li-ion 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 8 hr; Hybrid mode: 13 hr **Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro vPro mod				nnection 12						AC adapter Operating system	170W or 230W slim tip AC adapter One of the following, configurable by model:
WLAN (optional) Bluetooth™ (opt)	Intel Wi-Fi Bluetooth	5.0 wir	eless, ir	ntegrated	n Wi-Fi + E			dapter			-	 Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
SIM card (opt)	 One of the following, configurable by model: Wireless WAN upgradable (special bid only in 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 								d		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
											Mil-Spec test	MIL-STD-810G military testing
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P53s Platform Specifications

Number Cores Threads Frequency Frequency Frequency Tournest Frequency Tournest Treads Tre	Processor	8th Generation Intel® Core™ i7 Processor	Dimensions WxDxH: 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
Case material Display cover: PP\$ / 50% GF Bottom PA / 50% GF PA / 50			Weight starting at 3.87 lb / 1.75 kg Case color Black
Graphics Intel UHD Graphics 620 in processor and NVIDIA Quadro* PS20, 2GB GDDH5 memory, supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C; supports external digital monitor via HDMI of USB Type-C dean 1 (with the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (WAWN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWWN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof card slot (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP). HDMI 14.b; thereof card slot (E.f.4.5), nano-SM card slot (wWNN models) in the function of PD and DP. HDMI 14.b; thereof card slot (E.f.5.5) and the function of PD and DP. HDMI 14.b; thereof card sl		i7-856511 1.8 GHz 4.6 GHz 8MB Intol LIHD Graphic	Case material Display cover: PPS / 50% GF;
Hedia reader NVIDIA Quadro" P520, 258 GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays: Max resolution: 3840x2160 € 6014z (USB-C); 3840x2160 € 3014z (HDMI) Chipset Intel SGC (system on Chip) platform Memory ABG or 1665 memory soldered to systemboard, one DDR4 SO-DIMM socket national memory is stated memory is actually 2666Mrt but not at 2400Mrt but not but n			BOULDIN. PA / 50 % GF
Memory Multi-louch (opt) Multi-louch (opt) Multi-louch (opt) Multi-louch (opt) Memory		NVIDIA Quadro® P520, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 3840x2160@60Hz (USB-C); 3840x2160@30Hz (HDMI)	Media reader Ports MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
Size Resolution Type Surface Brightness Aspect Contrast Color Ratio		48GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Here we will be the service of the	Display		USB-C to DP: Lenovo USB-C to DisplayPort Adapter
15.6° OHD (3840x2160) IPS Anti-glare 500 nits 16:9 1200:1 100% Adobe 170° Adobe 170° Adobe 170° Audio support		15.6" FHD (1920x1080) IPS Anti-glare 250 nits 16:9 700:1 45% 170°	
Multi-touch (opt) Pen On-cell touch, supports 10-finger gesture (FHD only) None stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack Storage Supports single sided M.2 2280 GSD / PCIe NVMe, PCIe 3.0 x 4		15.6" UHD (3840x2160) Dolby Vision™ HDR IPS Anti-glare 500 nits 16:9 1200:1 100% Adobe 170°	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage,			stereo speakers, 2W x 2, Dolby® Audio™ Premium /
• M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Bluetooth™ Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband Verizon LTE (US) SIM card • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth™ WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband Verizon LTE (US) SIM card SIM card (opt) Security Chip Security chip Security chip Security chip System Mgt (opt) Intel VPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest NEC (optional) Near Field Communication Max battery life Max battery life MobileMark® 2014: **Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery depot repair service	Storage	• M.2 2280 SSD / SATA 6.0Gb/s	
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) WWAN (optional) Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Near Field Commúnication Battery Max battery life *AC adapter Operating system Windows* 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery limited onsite service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing		 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 Intel Optane™ Memory H10 with Solid State Storage. 	Security chip Discrete TPM 2.0, TCG Certified System Mgt (opt) Intel vPro Technology
Hitel Ethernet Connection I219-V (Jacksonville) WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth ™ WWAN (optional) WWAN (optional) WWAN (optional) One of the following, configurable by model: Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card Nano-SIM card slot, optional Lieutooth 5.0 Nano-SIM card slot, optional Lieutooth 5.0 Nano-SIM card			
Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) WWAN (optional) Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter AC adapter Operating system Windows* 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service Mil-STD-810G military testing		vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Battery Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing		Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter	* Battery life varies significantly with settings, usage, & other factors adapter 65W USB Type-C AC adapter
• Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	WWAN (optional)		
Mil-Spec test MIL-STD-810G military testing	SIM card (opt)	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable 	 1-year depot repair service 3-year/1-yr battery depot repair service
Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant	/	V-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	, , ,
			Environment EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant













ThinkPad P72 Platform Specifications

Processor # of Mumber Cores Threads Frequency Frequ	wer Delivery and DP), rd reader, e ls
E-2176M 6 12 2.7 GHz 4.4 GHz 12MB DDH4-2400 Intel UHD Graphics E-2186M Intel UHD Graphics Intel	wer Delivery and DP), rd reader, e ls
NVIDIA Quadro® P600 (4GB memory), P2000 (4GB memory), p2000 (4GB memory), p3200 (6GB memory), P3200 (6GB memory), p4200 (8GB memory), or P5200 (16GB memory); supports external digital monitor via HDMI, Mini DisplayPort, or Thunderbolt™; supports four independent displays; Max resolution: 3840X2160 @ 60Hz (DisplayPort via Mini DisplayPort cable); 5120X2880 @ 30Hz (Thunderbolt); 4096x2160 @ 60Hz (HDMI) Chipset Memory Mobile Intel CM246 Chipset 128GB non-ECC or 64GB ECC max / 2400MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets * Installed DIMMs are actually 2666MHz but run at 2400MHz due to Intel limitation Display Some: 17.3" (439mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, and the support in the function of Pow Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart carc 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 / Optional: Lenovo Mini-DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart carc 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 / Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor cable Camera (optional) IR camera and HD720p camera, fixed focus 4-udio support 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 / Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor cable Camera (optional) IR camera and HD720p camera, fixed focus 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 / Optional: Lenovo	rd reader, e ls
Memory 128GB non-ECC or 64ĠB ECC max / 2400MHz DDR4 (ECC function supported only on Xeon processor), dual-channel capable, four DDR4 SO-DIMM sockets * Installed DIMMs are actually 2666MHz but run at 2400MHz due to Intel limitation Display Some: 17.3" (439mm) FHD (1920x1080), anti-glare, LED backly liPS, 300 nits, 1700 missing library l	
10.0 compatible 2004 approximation 700/ promoted 1700 viewing approximation (Nevpoard 6-row, Spill-resistant, multimedia Fn Keys, numeric Keypad	
Some: 17.3" (439mm) UHD (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% Adobe gamut,	
Multi-touch Pen None Storage Up to 3 drives (two M.2 SSD and one HDD), supports single sided M.2 2280 drives only Security Power-on password, hard disk password, supervisor pass Security chip Discrete TPM 2.0, TCG Certified Power-on password, hard disk password, supervisor pass Power-on password, hard disk password, supervisor pass Discrete TPM 2.0, TCG Certified Intel vPro Technology Finder Power-on password, hard disk password, supervisor pass password, supervisor password, hard disk password, supervisor password, su	
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s Near Field Communication	
Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 RAID (optional) Optical RAID 0/1 support None Battery Max battery life MobileMark® 2014: 16 hr *Battery life varies significantly with settings, usage, & other factors and the control of th	,
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) AC adapter 230W slim tip AC adapter Operating system One of the following, configurable by model:	
WLAN 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 • Windows 10 Pro 64	
WWAN None SIM card 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™ Gold (US only); ENERGY STAR® 7.0; RoHS-corn Note: The specifications above may not be available in all regions.	













ThinkPad P73 Platform Specifications

Processor				e [™] i5 / i7 / i9				_		Dimensions	WxDxH: 16.38" x 11.06" x 1.02-1.22"; 416mm x 281mm x 25.9-31mm
	Processor Number	# of Cores			Max Turbo Frequency	Cache	Memory Types		ocessor raphics	Weight Case color Case material	Starting at 7.5 lb (3.4kg) Black Display cover: GFRP + PPS;
	i5-9400H	4	8	2.5 GHz	4.3 GHz	8MB		Intel UHD Gra			Bottom: Magnesium/Aluminum
	i7-9750H	6	12	2.6 GHz	4.5 GHz	12MB				Smart card reade	er Optional: Smart card reader
	i7-9850H i9-9880H	6 8	12 16	2.6 GHz	4.6 GHz 4.8 GHz	12MB 16MB	DDR4-2666	6	630	ExpressCard	None
				2.3 GHz				Intel I II	HD Graphic	Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card
	E-2276M	6	12	2.8 GHz	4.7 GHz	12MB			P630	Ports	Three USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Graphics	NVIDIA Qu RTX 3000 or RTX 50 supports 6 supports f	uadro® (6GB 00 Ma externa ive ind	P620 (4 GDDR6, x-Q (160 Il digital r ependen	or P630 in p GB GDDR5 VR ready), GB GDDR6, monitor via l t displays; Hz (Thunde), T2000 (RTX 400 VR ready HDMI or T	4GB GI) Max-0); hunder	Q (8GB GI bolt™;		2,7	Monitor cable (optional)	two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Chipset	Mobile Inte				,,		(<u>'</u>	1`'	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Memory	128GB ma	ax / 26	66MHz C	DR4 (ECC	function s	upporte	ed only on	Xeon p	rocessor),	Bundled Accy	None
	dual-chan	nel cap	pable, fou	ır DDR4 SC)-DIMM so					Camera (optional	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2 / dual array far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
Display	Size Reso			Type Surfac		iess F	spect Cont latio Rat	io Gan	nut Angle	Audio support	
	17.3" FHD (1920x108			PS Anti-glare	ire 300 i	nits 1	6:9 700	:1 72°	% 160°	Keyboard	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight
N.A. dati a da	Dolby	(3840x Vision	2160) ™ HDR	IPS Anti-gla	400 i	nits 1	6:9 1000):1 100	% 170°	UltraNav™	3-button Mylar surface multi-touch touchpad
Multi-touch Pen	None None									Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage Optane™ memory RAID (optional)	Up to 3 drives (two M.2 SSD and one HDD), supports single sided M.2 2280 drives only • HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 bry Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2									Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest Optional: X-Rite Pantone factory color calibration (UHD model only) Near Field Communication
Optical	RAID 0/1 : None	suppoi	·							Battery	Integrated Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet	Non-vPro	model	: Intel Eth	nernet Conr	ection I21	9-V (Ja	cksonville)		Max battery life	<i>MobileMark</i> ® <i>2014:</i> 17.2 hr 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	vPro mod			nernet Conr				le)		AC adapter	* Battery life varies significantly with settings, usage, & other factors 170W or 230W slim tip AC adapter
WLAN <i>(optional)</i> Bluetooth™ <i>(opt)</i>				i 2x2 802.1° tegrated in '				lapter			One of the following, configurable by model:
WWAN SIM card	None None										Windows 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64
O oara	110110									Limited warranty	Windows 10 Pro 64 for Workstations
											One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant







ThinkPad T470 Platform Specifications

Пиологови	Cth Canar	ation I	otal® Car	otm :E /:7 D	×00000×0				NAMANI (antional)	One of the following configurable by model (MMAN) can accord with MiCircle			
Processor	6th Genera					or		_	vvvvan (optional)	One of the following, configurable by model (WWAN can coexist with WiGig): • Wireless WAN upgradable			
	Processor Number	# of	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Integrated Mobile Broadband 4G LTE-A,			
	i5-6200U	Coles	Tilleaus	2.3 GHz	2.8 GHz	3MB	Types	Graphics		Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card			
	i5-6300U	-		2.4 GHz	3.0 GHz	3MB		Intel HD Graphics		Integrated Mobile Broadband 4G LTE, I			
	i7-6500U	2	4	2.5 GHz	3.1 GHz	4MB	DDR4-2133	520	SIM card (opt)	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			
	i7-6600U	İ		2.6 GHz	3.4 GHz	4MB			Dimensions	WxDxH: 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm			
	7th Genera	ation Ir	ntel Core	i3 / i5 / i7 I			J.		Weight	Models 3-cell or 3 + 3-cell 6-cell or 3 + 6-cell			
	Processor	# of	# of	Base	Max Turbo		Memory	Processor	Trong	Magnesium 3.49 lb / 1.58 kg 3.92 lb / 1.78 kg			
	Number		Threads	Frequency	Frequency	Cache	Types	Graphics		PPS 3.63 lb / 1.65 kg 4.35 lb / 1.85 kg			
	i3-7100U			2.4 GHz	-	3MB			Case color	Black			
	i5-7200U			2.5 GHz	3.1 GHz	3MB		Intel HD Graphics	Case material	Display cover: Magnesium Hybrid or PPS;			
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	620		Bottom: Glass-Fiber Reinforced Plastic			
	i7-7500U			2.7 GHz	3.5 GHz	4MB				er Optional: Smart card reader			
	i7-7600U			2.8 GHz	3.9 GHz	4MB			Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I Three USB 3.1 Gen 1 (USB 3.0, one Always On),			
	* i7-6500U i								Forts	USB 3.1 Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and DP).			
Graphics	Intel HD G						® 040NAN	,		HDMI 1.4b, Ethernet (RJ-45), Dock connector			
	2GB 2 5GI	ırapnıc Hz GD	S 620 IN DR5 me	processor a mory (discr	and invibil ete model	A GEFO s are No	rce® 940MX OT available	in EMEA);	WiGig dook (ant)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed ThinkPad WiGig dock			
	supports e	externa	ıl digital r	nonitor via	HDMI or U	ISB Typ	e-C;	, ,	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
	supports the					٥		(1514)		USB-C to VGA: Lenovo USB-C to VGA Adapter			
		Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)						24Hz (HDMI)	Camera (optional)	7) 720p: HD720p resolution, fixed focus			
Chipset	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM socket							O DIMM coalcata	` .	IR & 720p: IR camera and HD720p camera (mutually exclusive with WiGig)			
Memory	* System cla	ocks do	wn for pro	cessors with	lower mem	ory conti	roller	O-DIMINI SOCKERS	Audio support	HD Audio, Realtek ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
Display	Some: 14	ome: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight,							 Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
. ,	22	20 nits,	16:9 asp	ect ratio, 4	00:1 contra	ast ratio)		UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
				HD (1920x ⁻ ect ratio, 4			ED backlig	ht,	Security	Power-on password, hard disk password, supervisor password, security keyhole			
							ED backlig	ht. IPS.	Security chip	Discrete TPM 1.2 or 2.0, TCG Certified			
	25	i0 nits.	16:9 asr	ect ratio. 7	00:1 contra	ast ratio	. 170° viewi	ng angle	vPro (optional)	Intel vPro Technology er <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboard bezel Near Field Communication			
Multi-touch (opt)								S cover only)	Fingerprint reade NFC <i>(optional)</i>				
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™								Internal battery	Optional: Integrated Li-Polymer 3-cell (24Wh)			
	Some: HL	DD / S/	ATA 6.00 ATA 6.00	ib/s, 2.5" W ib/s 2.5" w	ide, /mm i ide /mm i	nigh, Ad	tive Protect g. xxxGB SS	on System™		Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)			
				NVMe, PCI			y. AAAGD OC	,,		Models 3-cell 3 + 3-cell 6-cell 48Wh 6-cell 72Wh 3 + 6-cell 48Wh 3 + 6-cell 72Wh			
							ot as 2nd S	torage,		Integrated 6.9 hr 13.9 hr 13.9 hr 20.9 hr 27.1 hr			
Optical	Mu None	utually	exclusiv	e with WWA	AN and Wi	Gig				Discrete 6.9 hr 13.9 hr 14.3 hr 21.6 hr 21.2 hr 28.6 hr			
Ethernet	Non-vPro	madal	Intal Eth	arnot Con	anation IO1	0.1/ / lo	ماده معربانام/		AC adapter	* Battery life varies significantly with settings, usage, & other factors			
Ellielliel	vPro mode						Jacksonville Jacksonville)	l'	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter			
WLAN							st with WWAN	,	Operating system	n One of the following, configurable by model: • Windows® 7 Professional 64 preinstalled			
VVLAIN	Realtek®							<i>)-</i>		through downgrade rights in Windows 10 Pro 64			
							ac + BT4.1,			Windows 10 Home 64			
							ac + BT4.1,	M.2 card 302.11ac + BT4.1,		Windows 10 Pro 64			
	M.2 card		vireless-/	10∠03, \	vviaiy 802.	i iau +	vvi-⊏i ∠X∠ č	002.11a0 + D14.1,	Limited warranty	One of the following, configurable by model:			
Bluetooth™	Bluetooth 4	4.1 wir	eless, in	tegrated in	Wi-Fi + Blu	uetooth	combo ada	pter		 1-year depot repair service 1-year depot with 2-year system board repair service 			
	* Intel 8265	ac / 182	265ac card	d support BT	4.2 but is lin	nited to E	BT4.1 by Wind	lows OS		1-year limited onsite service			
										3-year/1-yr battery depot repair service			
										3-year/1-yr battery limited onsite service			
									Mil-Spec test	MIL-STD-810G military testing			
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Note: The specific	ations above	mav n	ot be ava	ilable in all	regions.				•	Lenovo			







ThinkPad T470s Platform Specifications

Processor	6th Generation Intel®	® Core™ i5 / i7	Processor			Dimensions	<i>WxDxH:</i> 13.03" x 8.93" x 0.67-0.74"; 331mm x 226.8mm x 16.9-18.8mm		
	Processor Number Cores Threads Frequency Frequency Frequency Graphics i5-6200U 5-6300U 2 4 2.4 GHz 3.0 GHz 3MB DDR4-2133		ase color Black or Silver						
	i7-6600U	2.6 GHz	3.4 GHz 4MB	JDD114-2100	520	Media reader	er <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)		
	or 7th Generation Int			M	Duranan	Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On), USB 3.1 Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and DP).		
	Number Cores Thr		 	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	i5-7200U i5-7300U i7-7500U i7-7600U	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.5 GHz 3MB 3.5 GHz 4MB	DDR4-2133	Intel HD Graphics 620	Monitor cable (optional)	ThinkPad WiGig dock, mutually exclusive with WWAN HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter		
Out of his						Camera (optional	I)HD720p resolution, fixed focus (models without camera are NOT available in EMEA)		
Graphics	Intel HD Graphics 52 supports external dig supports three indep	gital monitor vi pendent displa	a HDMI or USB Typ vs:	•		Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack		
Chipset	Max resolution: 409			96x2160@	24Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Memory	20GB or 24GB max ⁷ 4GB or 8GB memory * System clocks down f	⁷ / 2400MHz D y soldered to s	DR4, dual-channel systemboard, one D	DR4 SÓ-DI	IMM socket	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology		
Display		:9 aspect ratio,	700:1 contrast ratio	o, 160° view	ing angle		or <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest Near Field Communication		
Multi-touch (opt)	Some: 14.0" (355mi 300 nits, 16:9 On-cell touch, suppo	9 aspect ratio,	700:1 contrast ratio	o, 160° view	klight, IPS, ring angle	Max battery life MobileMark® 2014: up to 10.5 hr	Front Li-Polymer 3-cell (23Wh) and rear Li-ion 3-cell (26Wh), both Integrated MobileMark® 2014: up to 10.5 hr * Battery life varies significantly with settings, usage, & other factors		
Storage	One of the following, co			•		AC adapter	45W slim tip AC adapter, 45W or 65W USB Type-C AC adapter		
	 M.2 SSD / SATA 6. M.2 SSD / PCIe N 	.0Gb/s (e.g. xx VMe, PCle 3.0	x 4, 32Gb/s (e.g. x	xxGB SSD	M.2 PCIe NVMe)	Operating system	n One of the following, configurable by model: • Windows® 7 Professional 64 preinstalled		
Optical	None	al Etharnat Ca	nnaction 1010 V / Is	ا مالنه معربانام		_	through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 64		
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)						Windows 10 Pro 64		
	One of the following, co Intel Dual Band Will Intel Dual Band Will Intel Tri-Band Wirel	ireless-AC 826 ireless-AC 826	0, Wi-Fi 2x2 802.11 5, Wi-Fi 2x2 802.11	ac + BT4.1, ac + BT4.1,	M.2 card M.2 card	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service		
Bluetooth™	M.2 card	as integrated	n Mi Fi . Diveteeth	aamba ada	·	Mil-Spec test	MIL-STD-810G military testing		
	Bluetooth 4.1 wireles * Intel 8265ac / 18265a	ac card support l	BT4.2 but is limited to E	BT4.1 by Wind	dows OS	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		
(One of the following, co • Wireless WAN upg • Integrated Mobile E Qualcomm® Snapo • Micro-SIM card slo	gradable Broadband 4G dragon™ X7 L	LTE-A, ΓΕ-A (Sierra Wirele	ss EM7455)), M.2 card				
SIM card (opt)	- IVIICIO-CIIVI CAIU SIO	or, opt venzon	LIL (OO) OI LEHOV	, Johnsell	(LIVILA) Olivi calu		Lenovo		

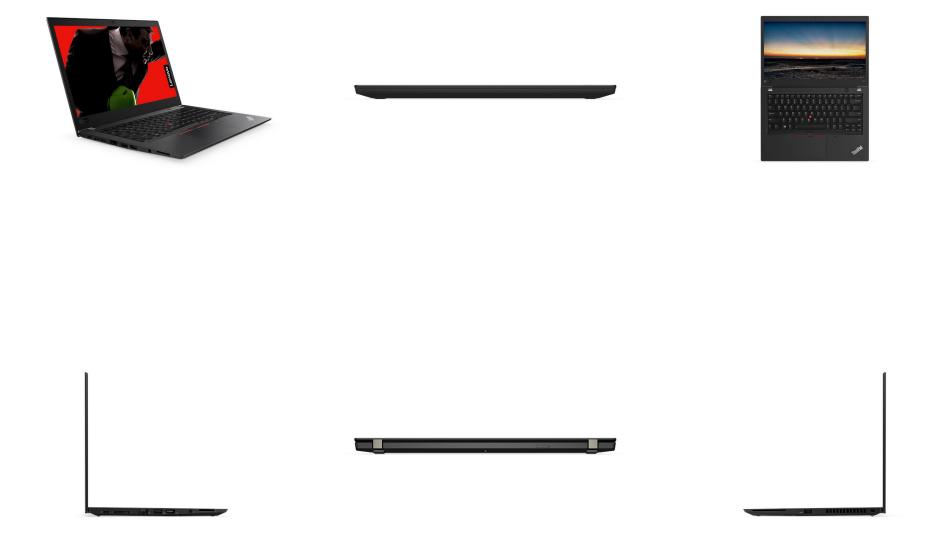






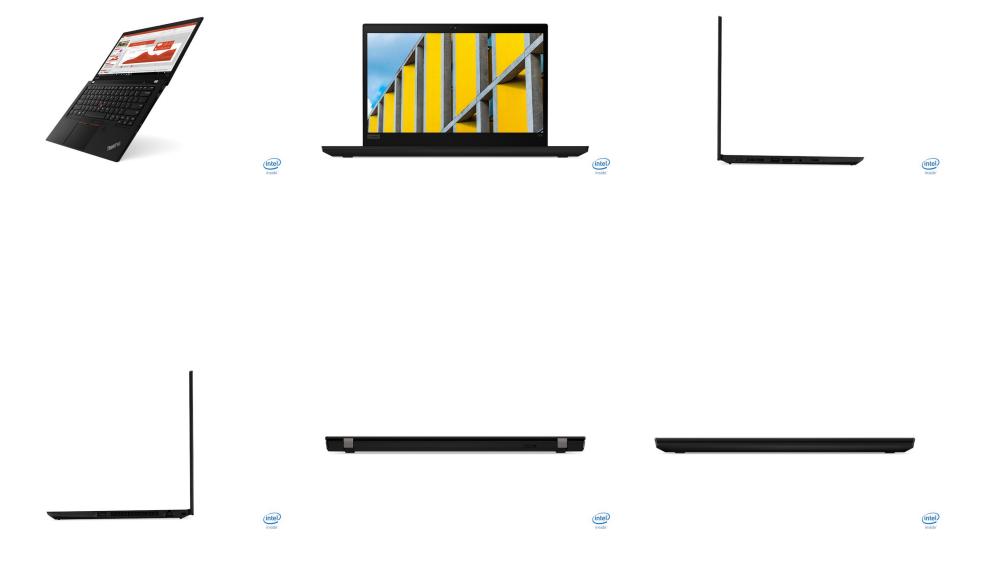
ThinkPad T480 Platform Specifications

Processor	7th Gener	ation Ir		e™ i5 Proc					Dimensions		13.25" x 9	.15" x 0.79"; 336.6mn			
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Weight	Models		24Wh or 24Wh + 24Wh			
	Number i5-7200U	Cores	Threads	Frequency 2.5 GHz	Frequency 3.1 GHz		Types	Graphics	-	Integrated N		3.49 lb / 1.58 kg	3.92 lb / 1.78		
	i5-7200U	2	4	2.5 GHz	3.1 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics 620		Integrated P Discrete Ma		3.63 lb / 1.65 kg 3.53 lb / 1.60 kg	4.08 lb / 1.85 3.97 lb / 1.80		
		oration	Intal Co		i7 Process			020	-	Discrete PP		3.68 lb / 1.67 kg	4.12 lb / 1.87		
	Processor	# of	# of	Base	Max Turbo		Momony	Processor	Case color	Black		1 0.00 lb / 1.07 kg	1.121071.07	Ng .	
	Number i3-8130U	Cores 2	Threads 4		Frequency 3.4 GHz	Cache 4MB	Memory Types	Graphics	Case material		ver: Magne Glass	esium Hybrid or PPS; -Fiber Reinforced Plasti	ic		
	i5-8250U		4	1.6 GHz	3.4 GHz	6MB			Smart card reade	r <i>Optional:</i> S	Smart card	reader			
	i5-8350U			1.7 GHz	3.6 GHz	6MB	DDR4-2400	Intel UHD Graphics	1			SD, SDHC, SDXC)			
	i7-8550U	4	8	1.8 GHz	4.0 GHz	8MB		620	Ports			one Always On), Gen 1 (with the function	of Power Delivery and	DieplayPort\	
	i7-8650U			1.9 GHz	4.2 GHz	8MB				one USB 3	.1 Type-C (Gen 2 / Thunderbolt 3 (v	with the function of PD	and DP),	
Graphics	Intel HD G NVIDIA® C (discrete g supports e supports t	raphic GeForc graphic externa hree in	s 620 or e® MX15 s <i>is avail</i> l digital r depende	Intel UHD 0, 2GB GE able only c nonitor via ent displays	Graphics 6 DR5 mem on <i>i7 model</i> HDMI or U s;	320 in p ory <i>Is in EN</i> ISB Typ	e-C;		Monitor cable (optional)	headphone 4-in-1 med side dockin * Depending HDMI to VO USB-C to L	e / micropho ia reader (I ng connecto on many fac GA: Lenov DP: Lenov	(RJ-45), nano-SIM card one combo jack, option MMC, SD, SDHC, SDX or, security keyhole ctors, actual data transfer so HDMI to VGA Monito USB-C to DisplayPol	al smart card reader, C), speed may be lower than the Adapter	neoretical spee	
Chipset Memory	32GB max	(/ 2400	MHz DE					O-DIMM sockets	Camera (optional, Audio support	ional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus rt HD Audio, Realtek® ALC3287 codec /					
Display	Some: 1	220 nit 4.0" (3	s, 16:9 a 55mm) l	spect ratio FHD (1920	, 400:1 cor x1080), an	ntrast ra ti-glare	ED backligh Itio LED backli Itio, 170° vie	ght, IPS,	Audio support	stereo spea dual array i headphone	akers, 2W : microphone / micropho	x 2, Dolby® Audio™ Pre e (optional for special b one combo jack	id model),		
	Some: 1	4.0" (3 300 nits	55mm) \ , 16:9 as	NQHD (25) spect ratio,	60x1440),	anti-gla	re, LED bac io, 72% gan	klight, IPS,	Keyboard UltraNav™	TrackPoint®	pointing d	multimedia Fn keys, opt evice and buttonless M	ylar surface multi-touch		
· · · ·	On-cell to	uch, su		Ö-finger ge	•				Security Security chip	Discrete TF	PM 2.0, TC		pervisor password, secu	ırity keyhole	
Storage	Some: H Some: S	DD / SA SD / SA	ATA 6.00 ATA 6.00	ib/s, 2.5" w	ide, 7mm l	high ^í , Ad		on System™ SD)	vPro (optional) Fingerprint reader NFC (optional)		Touch stylé anti-spoofin	match on chip fingerpr	int reader on the keybo	ard bezel,	
	Some: 12	28GB N WWAN	1.2 SSD I slot as	/ PCIe NVI 2nd Storag	Me, PCIe 3 ge, mutuall	y exclus	sive with WV	VAN	Battery	Optional in external Li-	tegrated Li ion 24Wh,	ion 24Wh battery and 48Wh, or 72Wh battery	/		
Optane™ memory							e to M.2 SSD	adapter limitation	Max battery life	Models	24W	h 48Wh 72Wh 24V	Vh + 24Wh 24Wh + 48Wh	24Wh + 72V	
Optical	None	ie iliei	ilory, i C	ie invivie, i	Ole 3.0 X	_			(MobileMark® 2014)	Integrated n	<i>nodel</i> 7.2 h		14.4 hr 21.8 hr	29.0 hr	
Ethernet	Non-vPro vPro mode						cksonville) Jacksonville)	AC adamtas		varies signi	ficantly with settings, usag	13.6 hr 19.8 hr e, & other factors	26.4 hr	
WLAN + Bluetooth™ <i>(opt)</i>	Intel Dual	Band V	Vireless-	AC 8265, V	Vi-Fi 2x2 8	02.11a		h 4.1, M.2 card	AC adapter Operating system		71	oe-C AC adapter 10 Home 64 or Window	s 10 Pro 64		
WWAN (optional)	One of the Wireless Integrate Intel XM Integrate	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) • 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							Limited warranty (optional)	One of the form of	ollowing, con epot repair epot with 2- yr battery o yr battery I	figurable by model:			
SIM card (opt)	* For non-V	/WAN n	nodèl, it m	eans the mo	odeľ is NOT l	NWAN ι			Mil-Spec test	MIL-STD-8	10G militai	ry testing			
	Nano-SIM	card s	lot, optio	nal Verizor	າ LTE (US)	SIM ca	rd		Environment	EDEATM G	old (LIS or	nly); ENERGY STAR® 6.	1. DoUS compliant		



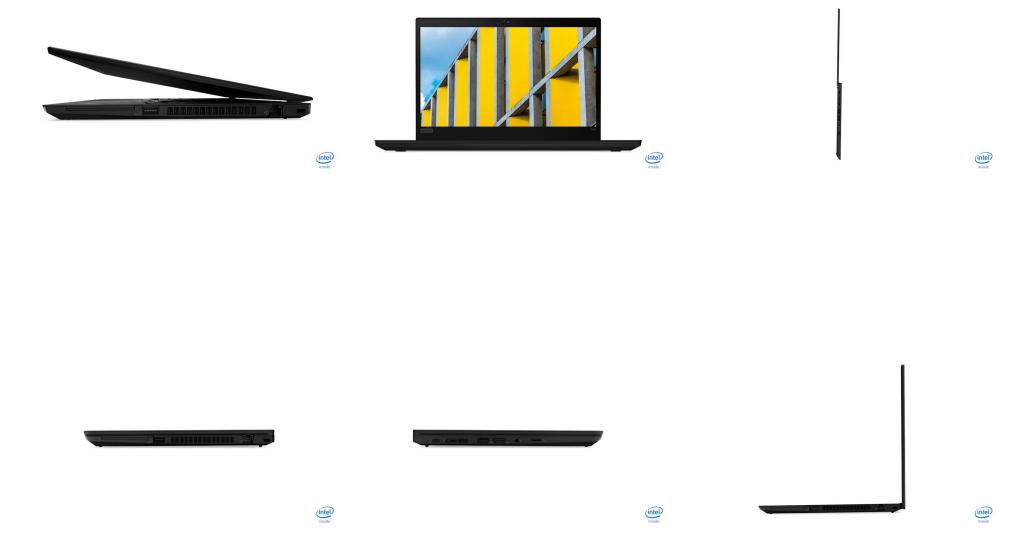
ThinkPad T480s Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions W	<i>VxDxH</i> : 13.03" x 8.93" x 0.73"; 331mm x 226.8mm x 18.45mm
	Processor # of # of Base Max Turbo Cache Memory Processor		itarting at 2.9 lb / 1.32 kg lack or Silver
	Number Cores Threads Frequency Frequency Types Graphics i5-7200U 2.5 GHz 3.1 GHz 3MB DEBLACES Intel HD Graphics	Case material D	Display cover: CFRP Hybrid;
	15-7300U 2 4 2.6 GHz 3.5 GHz 3MB DDR4-2133 THE HD GRAPHICS 620		Rottom: Magnesium
	or 8th Generation Intel Core i5 / i7 Processor	Media reader 4-	Optional: Smart card reader -in-1 reader (MMC, SD, SDHC, SDXC)
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Or	wo USB 3.1 Gen 1 (one Always On), ne USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 1.9	H he 4- si	ne USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), IDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), eadphone / microphone combo jack, optional smart card reader, -in-1 reader (MMC, SD, SDHC, SDXC), ide docking connector, security keyhole
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel UHD Graphics 620 in processor and NVIDIA® GeForce® MX150, 2GB GDDR5 memory (discrete models are NOT available in EMEA);	Monitor cable U	Depending on many factors, actual data transfer speed may be lower than theoretical speed ISB-C to VGA: Lenovo USB-C to VGA Adapter ISB-C to DP: Lenovo USB-C to DisplayPort Adapter
	supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	•	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
Chipset Memory	Intel SoC (System on Chip) platform 20GB or 24GB max / 2400MHz DDR4, dual-channel capable, 4GB or 8GB memory soldered to systemboard, one DDR4 SO-DIMM socket	st 	ID Audio, Realtek® ALC3287 codec / tereo speakers, 1W x 2, Dolby® Audio™ Premium / ptional dual array microphone, headphone / microphone combo jack
Display	* System clocks down for processors with lower memory controller Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,		-row, spill-resistant, multimedia Fn keys, optional LED backlight rackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
, ,	250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle, supports ThinkPad Privacy Guard on some models Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle	Security Pour Security chip Down (optional) In Fingerprint reader O	lower-on password, hard disk password, supervisor password, security keyhole biscrete TPM 2.0, TCG Certified attel vPro Technology optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Multi-touch (opt)	On-cell touch, supports 10-finger gesture, 250 nits (FHD only) One of the following, configurable by model:		lear Field Communication
Storage	• M.2 SSD / SATA 6.0Gb/s	65	ntegrated Li-ion 57Wh battery, supports Rapid Charge (0-80% in 60 mins) with 5W USB Type-C AC adapter
Optical	M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s None		NobileMark © 2014: 15.6 hr Battery life varies significantly with settings, usage, & other factors
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville)	AC adapter 45	5W or 65W USB Type-C AC adapter
	vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	Operating system O	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (opt)	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
	One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE,	•	1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)	Mil-Spec test M	IIL-STD-810G military testing
SIM card (opt)	 Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card 	Environment E	PEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
	ations above may not be available in all regions		Longvo



ThinkPad T490 Platform Specifications

Processor	8th Generation Intel® C	ore™ i5	i7 Processo	r				Dimensions	WxDxH:	1		m x 227mm x 17.9mm	
	Processor # of # of			bo Cache	Memory	Proces		Weight	Models	HD	FHD	FHD Low Power / WQHD	+
	Number Cores Threa			icy	Types	Graph	nics		Weight	3.37 lb / 1.53 kg	3.41 lb / 1.55 kg	3.23 lb / 1.46 kg	3.56 lb / 1.61 kg
	i5-8265U	1.6 0			-		0	Case color Case material	Black	cover: PPS / 50	P/ CE:		
	i5-8365U i7-8565U 4 8	1.6 0		_	-11111H4-2400	Intel UHD (Case material	Bottom:	PA / 50%			
	i7-8665U	1.9 0		_	_	020	,	Smart card reade					
	or 10th Generation Inte	_						Media reader		card reader	idei		
				`	1	, , , , , , , , , , , , , , , , , , , 	ooor	Ports		3.1 Gen 1 (one			
	Number Cores Threa	ds Frequ	ency Freque	ncy Cache	Types	Proce Grapl		1	one USB	3.1 Type-C Ger	n 2 / Thunderbolt	tion of Power Delivery at 3 (with the function of P	D and DP),
	i5-10210U 4 8	1.6 0			DDR4-2400	Intol LIUD	Cropbico		headnho	+D, Ethernet (RJ ne / microphone	-45), nano-Siivi c Lombo iack, onti	ard slot (WWAN models onal smart card reader,	i),
	i7-10310U 6 12	1.1 (_	-	inter or ib	Grapriics	'	microSD	card reader, sid	e docking connec	ctor, security keyhole	
			!			ļ		Monitor apple	* Dependi	ng on many factor	s, actual data transf	ctor, security keyhole er speed may be lower than	n theoretical speed
Graphics	Intel UHD Graphics 62 Intel UHD Graphics 62	or Intel	UHD Graph	ics in pro	cessor only	or		Monitor cable (optional)			HDMI to VGA Mo USB-C to VGA A		
	NVIDIA® GeForce® MX				cessor and			(optional)	USB-C to	o <i>HDMI:</i> Lenovo	USB-C to HDMI	Adanter	
	supports external digital				rbolt;				USB-C to	DP: Lenovo	USB-C to Displa	yPort Adapter	
	supports three indeper	dent dis	olavs;		•			Bundled Accy	None		•	,	
	Max resolution: 4096x			erbolt); 40)96x2160@	24Hz (HDI	MI)	Camera (optional) One of the	e following, configu	rable by model:		
Chipset	Intel SoC (System on C	hip) plat	form						• HD720	p camera with T	hinkShutter came	era privacy, fixed focus	
Memory	48GB max / 2400MHz 8GB or 16GB memory				DDB4 SO-	DIMM soci	cot	Audio support	IH cam HD Audid	era and HD720 o, Realtek® ALC	o camera with Thi	nkShutter camera priva	cy, fixed focus
	* Installed memory is actu						\C\	, tadio support			Dolby® Audio™ F	Premium /	
Display	metanea memery te acta	1	1	-			Viewing	a	dual arra	y far-field micro	phone (optional fo	or special bid model),	
Бюріцу	Size Resolution	Type S	urface Brigh	ness Asp			Angle	<u> </u>		ne / microphone			
	14.0" HD (1366x768)	TN An	ti-glare 220	nits 16	:9 400:1		90°	Keyboard	6-row, sp	ill-resistant, mul	timedia Fn keys,	optional LED backlight	
			250					UltraNav™		<u> </u>		Mylar surface multi-tou	
	14.0" FHD (1920x1080)	IPS An	ti-glare (non-t 300 (multi-	nits 10	:9 700:1	45%	170°	Security Security chip	Discrete	TPM 2.0, TCG (supervisor password, se	ecurity keyhole
	14 0" FHD (1920x1080)	IDO A	,	1		700/	4700	System Mgt (opt)	r Ontional	· Touch style ma	atch on chin finge	rprint reader on the palr	n rest
	14.0" Low Power	IPS An	ti-glare 400	nits 16	:9 800:1	72%	170°	NFC (optional)		ld Communication		ipiliti reader on the pair	11 1001
	FHD (1920x1080) 14.0" ThinkPad Privacy	IPS An	ti-glare 400	nits 16	:9 1000:	1 72%	170°	Battery	Integrate	d Li-ion 50Wh b / AC adapter	attery, supports F	Rapid Charge (charge up	o to 80% in 1hr)
	Guard							Max battery life		ark® 2014: 16.1	1 hr		
	14.0" WQHD (2560x1440 HDR, Dolby Vision TM	IPS G	lossy 500	nits 16	:9 1500:	1 100% Adobe	170°		* Battery	life varies significa	ntly with settings, us	sage, & other factors	
Multi-touch (opt)	On-cell touch, supports		or gooture (E	UD ophy		710000	1	AC adapter			JSB-C AC adapte	er	
			<u> </u>		\AE A\			Operating system (optional)		vs® 10 Home 64 vs 10 Pro 64			
Storage	 M.2 2280 SSD / SATA M.2 2280 SSD / PCIe 	4 6.0GD/ 4 NVMe	S (NOT avail	abie in Ei	VIEA)			(optional)		vs 10 P10 04 vs 10 Pro in S m	ode		
	 M.2 2242 SSD / PCIe 	NVMe,	PCIe 3.0 x 2	<u>.</u>				Limited warranty		e following, configu			
	 Intel Optane™ Memo 	ry H10 v	ith Solid Sta	te Storag	e,			(optional)		depot repair serv			
Ontical	M.2 2280, PCIe NVM	e 3.0 x 4	ļ						• 1-year o	depot with 2-yea	r system board re	epair service	
Optical	None		<u> </u>	1040 14 (1				-		imited onsite se			
Ethernet	Non-vPro model: Intel vPro model: Intel		Connection							1-yr battery depo	ot repair service ttery limited onsite	a carvica	
\A/I ANI .	One of the following, confi			IZ I 3-LIVI	(Jacksonvill	c)		-			ed onsite service	C SCI VICC	
WLAN + Bluetooth™	• Intel Wireless-AC 956			c + Blueto	ooth 5.0			Mil-Spec test		-810G military t			
(optional)	 Intel Wi-Fi 6 AX201, \ 							Environment			Y STAR® 7.1; Rol	JC compliant	
,	(AX201 for 10th Gen							Environment	CF CAI ····	Silver, ENERG	1 3 IAN* 1.1, NUI	13-compliant	
WWAN (optional)	One of the following, confi]					
,	 Wireless WAN upgrad 	ecial bid onl	y in EME	A)									
	Integrated Mobile Bro Integrated Mobile Bro	adband	4G LTE, Fib	com L83	0-EB, M.2 c	ard (EMEA	A only)						
	Integrated Mobile BroIntegrated Mobile Bro	adband	4G LIE-A, F 4G ITF-A F	ibocom I	00U-GL, MI 860-GI MII	∠ card MO 4v4 M	2 card						
	integrated Mobile DIC	uuvaiiu		DOODIII L	JJU GL, WIII	1VIO TAT, IVI	vaiu	1					
SIM card (opt)	* For non-WWAN model, i	means th	ne model is No	OT WWAN	upgradable								



ThinkPad T490 Secure Access / Healthcare Edition Platform Specifications

Processor	8th G	enera	tion In	tel® Co	re™	i5 / i7 Pr	ocessor					Dimensions	<i>WxDxH:</i> 12.95" x 8.94" x 0.70"; 329mm x 227mm x 17.9mm
	Proces		# of	# of		Base	Max Turbo	Cache	Memory	Proces		Weight	Models FHD Privacy Guard
	Numb	\rightarrow	Cores	Threads			rrequericy	6MB	Types	Graph	nics	Coop polor	Weight 3.41 lb / 1.55 kg 3.56 lb / 1.61 kg
	i5-826				_			6MB	In	tel LIHD (Granhics	Case color Case material	Black Display cover: PPS / 50% GF;
	i7-856		4	8	_	.8 GHz		8MB	DR4-2400 '''	620)		Keyboard cover: PC/ABS + Magnesium alloy
	i7-866	5U			1.	.9 GHz	4.8 GHz	8MB				_	(with ISO 22196 compliant anti-microbial surface treatment); Bottom: PA / 50% GF
	Intel U NVIDI suppo suppo Max r	JHD (IA® G orts ex orts th esolu	Graphic eForce sternal iree inc tion: 4	cs 620 MX2 digital depend 096x2	in pi 50, 2 mor lent (304 (nitor via H displays; @60Hz (1	and DR5 memo HDMI or Th	underbo	olt; 6x2160@24	Hz (HDN	ЛI)	Smart card reader RFID reader Media reader Ports	None RFID reader supporting RFID / NFC MicroSD card reader Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),
Chipset						olatform							HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN model),
Memory	8GB c	or 160	GB mei	mory s	olde	red to sy	nannel capa stemboard <i>it run at 2400</i>	, one DI	DR4 SO-DIN e to Intel limit	MM sock	et	- Monitor cable	headphone / microphòne combo jack, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Display	Size	Resolu	ution	-	Туре	Surface	Brightness	Aspect	Contrast Ratio	Color Gamut	Viewing Angle		HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to HDMI: Lenovo USB-C to HDMI Adapter
							250 nits					1	USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	14.0"	FHD (1920x10	080)	IPS	Anti-glare	(non-touch) 300 nits	16:9	700:1	45%	170°	Bundled Accy	None
							(multi-touch	1)				Camera (optional)	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0"		1920x10 Pad Priv	080) racy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3287 codec /
Multi-touch (opt)							ture (FHD	only)	•	•			stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Storage	• M.2	2280	SSD		NVN	Gb/s le, PCle le. PCle						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Inte	l Opta	ane™ N		/ H1	0 with Sc	olid State S	torage,				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Optical	None											System Mgt (opt)	Intel vPro Technology FIPS 201 fingerprint reader on palm rest
Ethernet	Non-v vPro i						ection I219		ksonville) acksonville)			NFC	NFC support via RFID reader
WLAN (optional) Bluetooth™ (opt)	Intel V	Virele	ss-AC	9560.	Wi-F	i 2x2 802	2.11ac + Bl	uetooth		er		Battery Max battery life	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 16.11 hr * Battery life varies significantly with settings, usage, & other factors
WWAN (optional)	One of	f the fo	llowing	, configi	urable	e by mode	el:					AC adapter	45W, 65W, or 65W slim USB-C AC adapter
	Wire	eless	WAN u d Mobil	ıpgrada le Broa	able	(special I	bid only) 'F-A Fiboo	om I 85	0-GL M 2 c	ard		Operating system	Optional: Windows® 10 Pro 64
SIM card (opt)	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable None									aru		Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery depot repair service 1-year + 2-year/1-yr battery limited onsite 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 specifica	ations a	bove	may no	ot be av	ailab	ole in all re	egions.						Lenow



ThinkPad T490s Platform Specifications

Processor	8th Generation In	ntel® Cor	e™ i5 / i7 P	rocessor					Dimensions	WxDxH (black with FHD / F	Privacy Guard):	
	Processor # of Number Cores i5-8265U	# of Threads	Base Frequency 1.6 GHz	riequency		Memory Types	Proce Grap			,	black with FHD Lo 12.94" x 8	3.90" x 0.66";´ 329.0mm x 2 w <i>Power / WQHD):</i> 3.89" x 0.63"; 328.8mm x 2	225.8mm x 16.1mm
	i5-8365U i7-8565U	8	1.6 GHz 1.8 GHz	4.1 GHz 6 4.6 GHz 8	MB MB	R4-2400	ntel UHD 62	Graphics	Weight	WxDxH (s	Silver): 12.96" x 8	Black with FHD Low Power / WQHD / Privacy Guard	226.45mm x 17.2mm Silver
	i7-8665U		1.9 GHz		MB				_	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 via ent displavs	ĤDMI or Thui :			lHz (HDI	MI)	Case color Case material Smart card reade	Bottom:			er);
Chipset Memory	Intel SoC (System 8GB, 16GB or 32	tel SoC (System on Chip) platform 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 6B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to systemboard, no sockets 7B, 16GB or 32GB / 3400MHz DDR4 / soldered to system							Media reader Ports	MicroSD Two USB one USB	card reader 3.1 Gen 1 (one A 3.1 Type-C Gen 1	lways On), (with the function of Power	
Display	Size Resolution	1	Type Surfac	e Brightness	Aspec			Viewing Angle		HDMI 1.4	lb, Ethernet extens	Thunderbolt 3 (with the fusion connector, nano-SIM can be jack, optional smart c	ard slot (WWAN models),
	14.0" FHD (1920x		IPS Anti-gla	re 250 nits (non-touch) 300 nits (multi-touch	10.9	700:1	45%	170°	Monitor cable (optional)	microSD * Dependir HDMI to	card reader, side on many factors, a VGA: Lenovo H	offibor jack, Optional shart to docking connector, security ictual data transfer speed may i DMI to VGA Monitor Adapte SB-C to VGA Adapter	keyhole be lower than theoretical spec
	14.0" FHD (1920x ⁻¹ Low Power		IPS Anti-gla	re 400 nits	16:9	800:1	72%	170°	Bundled Accy	USB-C to	DP: Lenovo U	SB-C to VGA Adapter SB-C to DisplayPort Adapte et Extension Adapter Gen 2	
	14.0" FHD (1920x ⁻ ThinkPad Pri Guard		IPS Anti-gla	re 400 nits	16:9	1000:1	72%	170°	Camera	One of the HD720p	following, configurate camera with Thir	ole by model: nkShutter camera privacy, fi	xed focus
	14.0" WQHD (2560 HDR, Dolby		IPS Gloss	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	HD Audio	o, Realtek® ALC32		mera privacy, fixed focus
Multi-touch (opt) Storage	• M.2 2280 SSD			sture (FHD or	nly)				_	dual array		olby® Audio™ Premium / one (optional for special bid ombo jack	model),
C.c.age	 M.2 2280 SSD M.2 2242 SSD Intel Optane™ 	/ PCle N / PCle N	NVMe, PCIe NVMe, PCIe	3.0 x 2	rage.				Keyboard UltraNav™	6-row, spi	ill-resistant, multim	nedia Fn keys, optional LED and buttonless Mylar surfac	backlight be multi-touch touchpad
Optical	M.2 2280, PCI None	e NVMe	3.0 x 4						Security Security chip System Mgt (opt)	Discrete 7	TPM 2.0, TCG Cei	isk password, supervisor pa tified	assword, security keyhole
Ethernet	Native Intel Ethe via bundled or or	ptional T	hinkPad Eth	ernet Extens	o) or I2 ion Ada	19-LM (<i>vF</i> pter Gen	Pro) 2		Fingerprint reader	r Optional:	Touch style match d Communication	h on chip fingerprint reader	on the palm rest
WLAN + Bluetooth™ (optional)	 One of the following Intel Wireless-A Intel Wi-Fi 6 AX 	AC 9560.	Wi-Fi 2x2 8	302.11ac + Bl	uetooth	5.0			Battery Max battery life	with 65W	d Li-ion 57Wh batt AC adapter ark® 2014: 20 hr	ery, supports Rapid Charge	(charge up to 80% in 1h
WWAN (optional)		g, configu	rable by mod						AC adapter	* Battery I		/ with settings, usage, & other f B-C AC adapter	actors
	Integrated Mob	oile Broad	dband 4G L	TE, Fibocom	L830-E	B, M.2 car	d (EME	4 only)	Operating system	Optional:	Windows® 10 Ho	me 64 or Windows 10 Pro 6	64
SIM card (opt)	* For non-WWAN n	Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable lano-SIM card slot, optional Verizon LTE (US) SIM card								1-year of1-year of3-year/	e following, configural depot repair servio depot with 2-year 1-yr battery depot 1-yr battery limited	e system board repair service repair service	
									Mil-Spec test		-810G military test		
									Environment	EPEAT™	Gold; ENERGY S	TAR® 7.1; RoHS-compliant	



ThinkPad T495 Platform Specifications

Processor	AMD Ryzen™ PRO	Mobile	Processo	rs with Rad	eon™ Ve	ga Graphics			Dimensions	WxDxH:	12.95" x 8.94" x	(0.70": 329mm)	c 227mm x 17.9mm
		# of		Max Turbo	Cache	Memory	Proce		Weight	Models	HD	FHD	FHD Low Power
	Number Cores The			Frequency	2MB L2 /	Controller	Grap Radeon		0		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		4MB L3		Grap		Case color Case material	Black Display co	ver: PPS / 50%	GF:	
	Ryzen 5 Pro 3500U 4	8	2.1 GHz		MB L2 / 4MB L3	DDR4-2400	Radeon Grap			Bottom:	PA / 50% G	F	
	Byzen 7	8	2.3 GHz	40 CH2 2	2MB L2 / 4MB L3		Radeon \ Grap	√ega 10	Smart card reade Media reader Ports	MicroSD ca	ard reader	er vs On), one USB 3	11 Gen 2
Graphics	AMD Radeon Vega supports external d supports four indep Max resolution: 409	ligital m enden	nonitor via t displays;	USB-C or I	HDMI;		HDMI)			two USB 3. HDMI 2.0, headphone microSD ca	.1 Type-C Ġen Ź Ethernet (RJ-45) e / microphone co ard reader. side o	(w/ the function o), nano-SIM card s ombo jack, optiona docking connector	f Power Delivery and DisplayPort 1.4) slot (WWAN models), al smart card reader, ; security keyhole peed may be lower than theoretical speed
Chipset Memory	AMD SoC (System 32GB max / 2400M 8GB or 16GB mem * Installed memory is a	IHz DD ory sol	R4, dual-d dered to s	channel cap ystemboard	d, one D			et	Monitor cable (optional) Bundled Accy	HDMI to Vo USB-C to V USB-C to I None	GA: Lenovo HI /GA: Lenovo US DP: Lenovo US	DMI to VGA Monit SB-C to VGA Ada SB-C to DisplayPo	or Adapter oter
Display	Size Resolution	Ту	pe Surface	Brightnes	s Aspec		Color Gamut	Viewing	Camera (optional)	One of the fo	ollowing, configuration	ble by model:	privacy, fixed focus
	14.0" HD (1366x768)	Т	N Anti-glaı	e 220 nits		400:1	45%	90°	.	 IR camer 	a and HD720p c	amera with Thinks	Shutter camera privacy, fixed focus
	14.0" FHD (1920x108	30) IF	PS Anti-gla	250 nits (non-touch 300 nits (multi-touc	ⁿ⁾ 16:9	700:1	45%	170°	Audio support	stereo spea		olby® Audio™ Predone (optional for s	mium / pecial bid model),
	14.0" FHD (1920x108 Low Power	³⁰⁾ IF	PS Anti-gla		-1	800:1	72%	170°	Keyboard UltraNav™	6-row. spill-	resistant. multim	nedia Fn kevs. opt	ional LED backlight ylar surface multi-touch touchpad
	On-cell touch, supp			sture (FHD	only)				Security	Power-on p	password, hard d	lisk password, sup	pervisor password, security keyhole
Storage	 M.2 2280 SSD / S M.2 2280 SSD / F M.2 2242 SSD / F 	PCIe N	VMe, PCI						Security chip System Mgt Fingerprint reade	DASH Man			int reader on the palm rest
Optical	None	0.0		, 0.0 X =					NFC	None	iodon otylo mato	ir on omp migorph	nicroador on the paint root
Ethernet	Realtek® RTL8111								Battery	Integrated with 65W A		ery, supports Rap	id Charge (charge up to 80% in 1hr)
WLAN	One of the following, of Realtek® RTL8822	2BĚ, W	√i-Fi 2x2 8	02.11ac + E			ard		Max battery life	MobileMar	<i>k[®] 2014:</i> 13.4 h	r y with settings, usag	e. & other factors
Bluetooth™	 Intel Wireless-AC Bluetooth 4.2 or 5.0 						adapter		AC adapter	45W or 65	W USB Type-C A	C adapter	.,
WWAN (optional)									' 			me 64 or Windows	s 10 Pro 64
SIM card (opt)	Wireless WAN up Integrated Mobile *For non-WWAN mod Nano-SIM card slot	gradab Broad del, it me	ole band 4G L eans the mo	TE-A, Fiboo	VWAN up	gradable	eard		Limited warranty (optional)	1-year de1-year de3-year/1-y1-year + 2	r battery ďepot r	e system board repa repair service ry limited onsite se	
									Mil-Spec test		10G military test		
									Environment	EPEAT™ S	ilver; ENERGY S	STAR® 7.1; RoHS-	compliant
Note: The enecified	ations above may not	ha avai	labla in all	rogiono									Lenov



ThinkPad T495s Platform Specifications

Processor	AMD	Rvzen™	PBO Mot	nile P	rocessor	s with Rade	on™ Ve	ga Graphics			Dimensions	WxDxH (FHD / Privacy G	uard):	
1 10000001	Proce				Base N	Max Turbo	Cache	Memory	Proce	essor		,	12.95" >	(8.90" x 0.66"; 329.0mm x	226.15mm x 16.7mm
	Numb		es Thread	s Fre	equency F	-requency		Controller	Grap		1	WXDXH (Low Power): 12.94" >	x 8.89" x 0.63"; 328.8mm x	225.8mm x 16.1mm
	Ryzer Pro 3		8	2.	1 GHz		MB L2 / MB L3		Radeon Grap		Weight	Models	FHD	FHD Low Power	FHD Privacy Guard
	Ryzer		8	2	3 GHz		/IB L2 /	DDR4-2400	Radeon	Vega 10	1 .	Weight	2.92 lb / 1.33 kg	2.76 lb / 1.25 kg	2.89 lb / 1.31 kg
	Pro 3	700U '				4	MB L3		Grap	hics	Case color Case material	Black	over: CFRP Hyl	orid:	
Graphics						phics in pro JSB-C or H		;			Guoc material	Bottom:		m/Aluminum	
	suppo	orts three	e indepen	dent	displays;		•				Smart card reade			der	
							96x21	60@24Hz (I	HDMI)		Media reader Ports		card reader 3.3.1 Gen 1 (Alwa	ays On), one USB 3.1 Gen 2	
Chipset Memory			stem on				etembo	ard, no sock	rate		1 0110	two USB	3.1 Type-C Gen	2 (w/ the function of Power I	Delivery and DisplayPort 1.4)
Wemory								ie to AMD lim						sion connector, nano-SIM ca combo jack, optional smart	
Display	Size	Resolutio	n	Type	Surface	Brightness	Aspec	t Contrast		Viewing		microSD	card reader, side	e docking connector, security	keyhole
	Oize	ricoolatio		Турс	Guriace	250 nits	Ratio	Ratio	Gamut	Angle	Monitor cable	~ Dependii HDMI to	ng on many tactors VGA: Lenovo I	, actual data transter speed may HDMI to VGA Monitor Adapt	be lower than theoretical speed er
	14 0"	FHD (192	0x1080)	IPS	Anti-glare	(non-touch)	16:9	700:1	45%	170°	(optional)	USB-C to	VGA: Lenovo	USB-C to VGA Adapter USB-C to DisplayPort Adapt	~ "
		(" "	, and grant	300 nits (multi-touch			1.075		Bundled Accy	Optional:	ThinkPa	d Ethernet Extension Adapt	er er Gen 2
	14.0"	FHD (192 Low Powe	0x1080)	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Camera		following, configur		
		FHD (192									1	 HD720 IR came 	o camera with Tr era and HD720p	ninkShutter camera privacy, to camera with ThinkShutter c	ixed focus amera privacy, fixed focus
		ThinkPad Guard	Privacy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	o, Realtek® ALC3	287 codec /	,,
Multi-touch (opt)	\Box		supports	10-f	inger ges	ture (FHD o	only)				1			Dolby [®] Audio [™] Premium / d microphone, headphone /	microphone combo jack
Storage	M.2 2	280 SSI) / PCle N								Keyboard			imedia Fn keys, optional LE	
Optical	None		0444EDV	0:	. la :4 T.4 la . a .						UltraNav™ Securitv			e and buttonless Mylar surfa	
Ethernet WLAN (optional)						net connect 2.11ac + Blu					Security chip		i password, nard TPM 2.0, TCG C	disk password, supervisor pertified	assword, security keynole
WLAN (<i>optional)</i> Bluetooth™								ombo adapi	ter		System Mgt		anagement		
WWAN (optional)	One o	f the follo	wing, confi	gurabi	le by mode	el:					NFC	None	rouch style ma	tch on chip fingerprint reade	r on the paim rest
	• Wire	eless WA	N upgrad	dable	nd 4G 13	TE A Eiboo	om I 05	60-GL, M.2 c	ard		Battery	Integrate	d Li-ion 57Wh ba	attery, supports Rapid Charg	e (charge up to 80% in 1hr)
OIM (4)	* For r	ion-WWA	N model, it	t mear	ns the mod	del is NOT W	WAN up	gradable	aiu		Max battery life		' AC adapter ark® 2014: 16.4	hr	, , ,
SIM card (opt)	Nano	-SIM car	d slot, op	tiona	l Verizon	LTE (US) S	IM car	d			1	* Battery	life varies significar	ntly with settings, usage, & other	factors
											AC adapter		5W USB Type-C		
														ome 64 or Windows 10 Pro	64
											Limited warranty (optional)		following, configur depot repair serv	,	
											(• 1-year o	depot with 2-year	system board repair service)
													1-yr battery depo 1-yr battery limite	ot repair service ed onsite service	
											Mil-Spec test		-810G military te		
											Environment	EPEAT™	Silver; ENERGY	′ STAR® 7.1; RoHS-compliar	nt
Note: The specifica	tions a	above ma	y not be a	vailat	ble in all r	egions.									Lenovo







ThinkPad T580 Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions WxDxH: 14.40" x 9.95" x 0.79-0.80"; 365.8mm x 252.8mm x 19.95-20.2mm
	Processor # of # of Base Max Turbo Cache Types Processor Graphics	Weight Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg
	15-7200U 2 4 2.5 GHz 3.1 GHz 3MB 2.6 GHz 3.5 GHz 3MB 2.6 GHz 3.5 GHz 3MB 10 CHz 10	Case color Black Case material Display cover: GFRP + PPS; Bottom: GFRP
	or 8th Generation Intel Core i5 / i7 Processor	Smart card reader Optional: Smart card reader
	Processor # of Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Media reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Ports Two USB 3.1 Gen 1 (one Always On),
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2 GHz	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 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;	* Depending on many factors, actual data transfer speed may be lower than theoretical speed 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 external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * System clocks down for processors with lower memory controller	Audio support HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone (optional for special bid model), headphone / microphone combo jack
Display	Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LED backlight, IPS, 300 nits,	Keyboard 6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch (opt)	16:9 aspect ratio, 1000:1 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 keyhole Discrete TPM 2.0, TCG Certified
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) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s	vPro (optional) Intel vPro Technology Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology NFC (optional) Near Field Communication
	Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN	Battery Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery
Optane™ memory Optical	Optional: Intel Optane memory, PCle NVMe, PCle 3.0 x 2 None	Max battery life (MobileMark® 2014) Max battery life (MobileMark® 2014) Max battery life 5.8 hr 12.5 hr 18.1 hr 13.8 hr 20.3 hr 26.1 hr
Ethernet	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville)	* Battery life varies significantly with settings, usage, & other factors AC adapter 45W or 65W USB Type-C AC adapter
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN (optional)	One of the following, configurable by model: • Wireless WAN upgradable (special bid only) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A,	Limited warranty (optional) One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	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 G	eneration	Intel® C	ore™	i5 / i7 Pro	ocessor					Dimensions	<i>WxDxH:</i> 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
	Proces	er Core		ds Fre	equency F	Max Turbo Frequency	Cache	Memory Types	Proce Grap		Weight Case color Case material	FHD model: 3.87 lb / 1.75 kg; UHD model: 3.86 lb / 1.75 kg Black Display cover: PPS / 50% GF;
	i5-826 i5-836 i7-856 i7-866	5U 4	8	1	.6 GHz .8 GHz	3.9 GHz 4.1 GHz 4.6 GHz 4.8 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD 62		Smart card reade Media reader Ports	Bottom: PA / 50% GF er Optional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
Graphics	Intel U NVIDI suppo suppo Max r	JHD Grap A® GeFo rts extern rts three esolution	phics 62 rce® MX nal digita indeper : 4096x	0 in p 250, 2 al mor dent 2304	@60Hz (T	and)R5 memo IDMI or Th	nunderl	oolt; 96x2160@2	24Hz (HDI	MI)	- 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	r 16GB r	00MHz nemory	DDŔ/ solde	4, dual-ch red to sys	stemboard	d, one [DR4 SO-E	OIMM sock	ĸet	(optional) Bundled Accy Camera (ontional)	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 1) One of the following, configurable by model:
Display	Size	Resolution		Туре	Surface	Brightnes	s Aspe		t Color Gamut	Viewing Angle		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
		FHD (1920		IPS	Anti-glare	250 nits	16:9	700:1	45%	170°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
	15.6"	JHD (3840 HDR, Dolb	0x2160) y Vision™	IPS	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°		dual array far-field microphone (optional for special bid model), headphone / microphone combo jack
		II touch,	<u> </u>		nger gest	ure (FHD	only)				Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	M.2M.2Inte M.2	2280 SS 2242 SS	D / PCIe D / PCIe M Memo	NVN NVN ry H1	Ne, PCle Ne, PCle 0 with So	3.0 x 2	Storage	,			Security Security chip System Mgt (opt) Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology or Optional: Touch style match on chip fingerprint reader on the palm rest
Optical Ethernet	None	Pro mod	al: Intal	Ethor	net Conn	action I21	0-\/ (la	ckeonville)			NFČ <i>(optional)</i> Battery	Near Field Communication Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								,		Max battery life AC adapter	with 65W AC adapter MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics) * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WWAN (optional)	One of the following, configurable by model:											n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card	 Wireless WAN upgradable (special bid only in EMEA) 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 							-EB, M.2 ca 50-GL, M.2 ogradable	ard (EMEA card	A only)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
											Mil-Spec test	MIL-STD-810G military testing
					ما الم ما دم						Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant







ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Gener	ation Ir	ntel® Co	re™ i5 Pro	cessor				Dimensions	WxDxH: 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm				
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Graphics	Weight Case color Case material	Starting at 2.49 lb / 1.13 kg Black or Silver (silver case is NOT available in EMEA) Display cover: CFRP/GFRP hybrid;				
	i5-7300U	2	4	2.6 GHz	3.5 GHz	змв	LPDDR3-1866	Intel HD Graphics 620		Bottom: magnesium alloy / PPS hybrid				
	or 8th Ger	neratio	n Intel C	ore i5 / i7	Processor				Smart card reade Media reader	ernone MicroSD card reader, supports UHS-II				
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b,				
	i5-8250U i5-8350U	4	8	1.6 GHz 1.7 GHz	3.4 GHz 3.6 GHz	6MB 6MB	LPDDR3-2133	Intel UHD Graphics 620		Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole				
	i7-8550U i7-8650U			1.8 GHz 1.9 GHz	4.0 GHz 4.2 GHz	8MB 8MB		620	Monitor cable	* 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				
Graphics	Intel HD G supports e supports t	externa	digital	monitor vi	a HDMI or	620 in USB T	processor; ype-C;		(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2				
	Max resol	ution:	5120x28	380@60H	z (USB Typ	e-C); 4	1096x2160@3	30Hz (HDMI)	Camera (optional) One of the following, configurable by model:					
Chipset Memory	* System ci	SGB / 2 locks do	133MHz wn for pr	z ĽPDDR3 ocessors wi	/ soldered	l to sys mory co	temboard, no ntroller	sockets	Audio support	 HD720p camera with ThinkShutter camera privacy, 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					, I ED	backlight, IPS			headphone / microphone combo jack, Dolby® Atmos™ via headphones				
	300 nits	, 16:9 ́a 55mm)	aspect ra WQHD	atio, 700:1 (2560x14	contrast ra 40), anti-gl	atio, 72 are, LE	% gamut, 170 D backlight, I	o viewing angle PS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad				
	• 14.0" (3	55mm) ckliaht.	HDR W	'QHD (256	60x1440) w	ith Dol	by Vision™, gl	o viewing angle lossy, atio, 100% gamut,	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Touch style match on chip fingerprint reader on the palm rest,				
Multi-touch (opt)	On-cell to	uch, su	ipports ⁻	10-finger g	esture (FF	ID only)			nouth style match on this imgerprint reader on the paint rest, anti-spoofing technology Near Field Communication				
Storage	One of the													
	 M.2 SSI M.2 SSI) / SAI.) / PCI	a 6.0Gb e NVMe	/s (e.g. xx . PCle 3.0	x 4. 32Gb	M.2) /s (e.a.	xxxGB SSD I	M.2 PCIe NVMe)	Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter				
Optical	None								Max battery life	MobileMark® 2014: 19.3 hr				
Ethernet							or I219-LM (v n Adapter Ger		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W, 45W Low Halogen, 65W, or 65W Low Halogen USB-C AC adapter				
WLAN +	One of the	followin	g, configu	ırable by mo	odel:					n Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
Bluetooth™	 Intel Wir (special 	eless- <i>l</i> bid onl	AC 9260 v)	, Wi-Fi 2x2	2 802.11ac	+ Blue	l1ac + Bluetoo tooth 5.0, M.2 y Windows OS	oth 4.1, M.2 card card		One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service				
WWAN (optional)	Intel XMM	tegrated Mobile Broadband 4G LTE-A, tel XMM™ 7360 (Fibocom L850-GL), M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable								 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service 				
SIM card (opt)	* For non-V Nano-SIM								Mil-Spec test	MIL-STD-810G military testing				
,			-7 - Ir		, , , ,	,	•		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
										Lenov				

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ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th Generation Intel® Co	oroTM	iE / i7 Dro	200000					MMMAN (antional)	One of the following, configurable by model:
FIOCESSOI		_					-		VVVAIN (Optional)	Wireless WAN upgradable (special bid only)
	Processor # of # of Number Cores Thread		Base M	Max Turbo Carequency	ache N	Memory Types		essor phics		 Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card
	i5-8265U				мв		Gia	priioo		• 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
	i5-8365H				MB	DDDD0 0400	Intel	UHD	SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i7-8565U 4 8	1.	.8 GHz	4.6 GHz 8	MB L	PDDR3-2133		ics 620	Dimensions	WxDxH (Privacy Guard): 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm
	i7-8665U	1.	9 GHz	4.8 GHz 8	МВ				Difficiations	WxDxH (other model): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95mm
	or 10th Generation Intel	l Cor	e i5 / i7 Pı	rocessor (N	OT av	ailable in EM	1EA)		Weight	Privacy Guard model: starting at 2.66 lb / 1.21 kg;
	Processor # of # of			Max Turbo	acha	Memory Types		essor	Case color	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave
	Number Cores Thread			-requency		wellioly types	Gra	phics	Case material	Display cover: Carbon Fiber;
	i5-10210U 4 8				MB	DDDD0 0400	Intel	UHD		Bottom: magnesium alloy
	i7-10510U	_			MB I	LPDDR3-2133	Gra	phics	Smart card reade	
									Media reader Ports	None Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
Graphics	Intel UHD Graphics 620 supports external digita	or Ir	ntel UHD (Graphics in	proce	essor;	wholt.		Forts	(with the function of Power Delivery and DisplayPort), HDMI 1.4b,
	supports three independent			IDIVII OI USE	э туре	-C / munder	iboit,			Ethernet extension connector, nano-SIM card slot (WWAN models),
	Max resolution: 5K@60			olt); 4K@2	4Hz (I	HDMI)				headphone / microphone combo jack, side docking connector, security keyhole
Chipset	Intel SoC (System on C								Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter
Memory	8GB or 16GB / 2133MF	lz ĽP	DDR3/s	oldered to s	ysten	nboard, no so	ockets		Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2
Display	Size Resolution	Туре	Surface	Brightness	Aspec Ratio	t Contrast	Color	Viewing	Camera (optional)	One of the following, configurable by model:
	0.20 1.00014.1011	1,700		Drightmood	Ratio	Ratio	Gamut	Angle		HD720p camera with ThinkShutter camera privacy, fixed focus ID comera and UD700p camera with ThinkShutter camera privacy, fixed focus
	14.0" FHD (1920x1080)		Anti- reflection						Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3286 codec /
	Multi-touch	IPS	Anti-	300 nits	16:9	700:1	72%	170°	, tadio capport	Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 /
	FUD (1000 1000)		smudge							four 360° far-field microphones, headphone / microphone combo jack
	14.0" FHD (1920x1080) Low Power	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight
	FHD (1920x1080)								UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0" ThinkPad Privacy Guard	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Security	Power-on password, hard disk password, supervisor password, security keyhole
	14.0" WQHD (2560x1440)	IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	Security chip	Discrete TPM 2.0, TCG Certified Intel vPro Technology
	UHD (3840x2160)	11 0	Anti-giare	300 11113	10.5	700.1	12/0	170	Fingerprint reader	r Touch style match on chip fingerprint reader on the palm rest
	14.0" HDR 400,	IPS	Glossy	500 nits	16:9	1400:1	90%	170°	NFČ (optional)	Near Field Communication
NA	Dolby Vision™	L.		10.0		(FUD 1)			Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Multi-touch (opt)	Capacitive-type multi-to anti-reflection (AR) / a	uch, nti-er	supports	10-finger ge	esture	(FHD only),			Max battery life	with 65W AC adapter MobileMark® 2014: 18.3 hr
Storago	One of the following, config			, ,					I wax ballery lile	* Battery life varies significantly with settings, usage, & other factors
Storage	 M.2 2280 SSD / SATA 								AC adapter	45W, 65W, or 65W slim USB-C AC adapter
	 M.2 2280 SSD / PCIe 	NVN	Ле 3.0 x 4						Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	Intel Optane Memory No. 2000 POLE NIVIN			State Stora	age,				Limited warranty	One of the following, configurable by model:
Optical	M.2 2280, PCIe NVMe None	e 3.0	x 4							1-year depot repair service
Ethernet	Native Intel Ethernet Co	nnc	otion 1210	V (Non vD	ra) or	1210 I M (vD	ro)		+	 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service
Luieillet	via optional ThinkPad E	therr	net Extens	sion Adapte	r Gen	12 19-LIVI (<i>VP1</i> 2	10)			3-year/1-yr battery limited onsite service
WLAN +	One of the following, config								Mil-Spec test	MIL-STD-810G military testing
Bluetooth™	• Intel Wireless-AC 9560	, 0, Wi	-Fi 2x2 80	02.11ac + B					Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant
	 Intel Wi-Fi 6 AX201, W 									
	(AX201 for 10th Gen				valiab	ie in AP)				
Note: The specific	ations above may not be a	vailat	ole in all re	gions.						Lenovo





















ThinkPad X1 Extreme Platform Specifications

		ocessor				er Optional: Smart card reader
of # of		Max Turbo Cach	e Memory	Processor	Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On),
	2.3 GHz	4.0 GHz	, ''	·		two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 2.0. Ethernet extension connector.
4 0		4.2 GHz	DDR4-2666	Intel UHD Graphics		headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole
6 12	2.6 GHz	4.1 GHz 9ME	3	030		* Power Delivery only supports power-out for charging peripherals
			\		Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
					(optional) Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
		oolt): 4K@60H	z (HDMI)		Camera (optional) One of the following, configurable by model:
CM246 Chips	et .		,		1	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus
					Audio support	HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
nits, 16:9 asp	ect ratio, 70	0:1 contrast ra	, LED backii tio,	gnt, IPS,		dual array microphone (optional for special bid model),
			Dolby Vision	n™ LED backlight	Kovboard	headphone / microphone combo jack, Dolby Atmos® headphone 6-row, spill-resistant, multimedia Fn keys, LED backlight
400 nits, 16:9	9 aspect rati	io, 1200:1 [′] cont	rast rátio,	, ,	UltraNav™	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
/pe multi-touc	h. supports				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
SATA 6.0Gb/s	s (e.g. xxxG		xxxGB SSD	M.2 PCle NVMe)	Fingerprint reade Color calibration	r Touch style match on chip fingerprint reader on the keyboard bezel
	. 0.0 0.0 %	., 0_0.0,0 (0.9	700.002 002	: 0:0 ::::0)		Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
-thernet Conr	nection 1219	A-V (Non-vPro)	or I219-I M ((vPro))	Max battery life	Discrete mode: 9.5 hr; Hybrid mode: 14.9 hr
				(** 10))	AC adapter	135W slim tip AC adapter
					- · · · · · · · · · · · · · · · · · ·	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
y wireless, int	.cgrateu iii v	WITT + DIUCIOO	ur combo aa	αριοι		One of the following, configurable by model: • 1-year depot repair service
					(0,000000)	3-year/1-yr battery depot repair service
					Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing
<i>nodel:</i> ´ starti	ng at 3.76 lb	b / 1.7 kg;			Environment	EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant
	•	υ / 1.8 kg				
	4 8 6 12 Graphics 630 in Force GTX 1 ternal digital rur independen ion: 5K @ 60H CM246 Chips / 2666MHz DE 6" (396mm) From the control of the	Cores Threads Frequency 4 8 2.3 GHz 2.5 GHz 6 12 2.6 GHz Graphics 630 in processor efferce® GTX 1050 Ti Max ternal digital monitor via fur independent displays; ion: 5K@60Hz (Thundert CM246 Chipset / 2666MHz DDR4, dual-cf 6" (396mm) FHD (1920x1 nits, 16:9 aspect ratio, 70 gamut, 170° viewing ang 19" (396mm) HDR UHD (38, 400 nits, 16:9 aspect ratio), 70 gamut, 170° viewing ang 19" (396mm) HDR UHD (38, 400 nits, 16:9 aspect ratio), 70 gamut, 170° viewing ang 19" (396mm) HDR UHD (38, 400 nits, 16:9 aspect ratio), 70 gamut, 170° viewing ang 19" (190 gamut	Cores Threads Frequency Frequency 4 8 2.3 GHz 4.0 GHz 2.5 GHz 4.2 GHz 6 12 2.2 GHz 4.1 GHz 2.6 GHz 4.3 GHz 2.6 GHz 4.3 GHz 2.6 GHz 4.3 GHz 3 Graphics 630 in processor and efforce® GTX 1050 Ti Max-Q, 4GB GDDF ternal digital monitor via HDMI or Thundour independent displays; ion: 5K @ 60Hz (Thunderbolt); 4K @ 60H CM246 Chipset / 2666MHz DDR4, dual-channel capable S" (396mm) FHD (1920x1080), anti-glare inits, 16:9 aspect ratio, 700:1 contrast ra 6 gamut, 170° viewing angle S" (396mm) HDR UHD (3840x2160) with, 400 nits, 16:9 aspect ratio, 1200:1 contrast ra 6 gamut, 170° viewing angle, multi-touc type multi-touch, supports 10-finger gest in Pro (special bid only) S (two M.2 SSD) / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. upport) Ethernet Connection I219-V (Non-vPro) or optional ThinkPad Ethernet Extension Ses-AC 9560, Wi-Fi 2x2 802.11ac + Blueto of the control of the co	Types Ty	Cores Threads Frequency Frequency Cache Types Graphics 4 8 2.3 GHz 4.0 GHz 2.5 GHz 4.2 GHz 6 12 2.6 GHz 4.3 GHz 9MB DDR4-2666 Intel UHD Graphics 630 Graphics 630 in processor and 65 Force GTX 1050 Ti Max-Q, 4GB GDDR5 memory; 65 GHz GHz GHz GHz GHz 66 GHz GHz GHz GHz 67 GHz GHz GHz 68 GHz GHz GHz 69 GHz GHz GHz 60 GHz 60 GHz GHz 60 GHz 60 GHz GHz 60 GHz 6	Types Graphics Cores Threads Frequency Frequency Cache Types Graphics

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

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ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th G	enerat	ion In	tel® Co	re™ i5	/ i7 / i9 I	Processo	r					Dimensions WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4			
	Proce Numb		# of Cores	# of Threads			lax Turbo requency	Cache	Memory Types		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;		
				8	2.5 2.6	GHz 4 GHz 4			DDR4-	4-2666 In	ntel UHD Graphics 630		Multi-touch model: starting at 4.0 lb / 1.81 kg Case color Black paint (FHD model) or black weave (UHD model) Case material Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy	Black paint (FHD model) or black weave (UHD model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy		
	i7-98		6 8	12 16				12MB 16MB					Media reader	er Optional: Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card		
Graphics	Intel UHD Graphics 630 in processor and NVIDIA® GeForce® GTX 1650 Max-Q, 4GB GDDR5 memory; supports external digital monitor via HDMI or Thunderbolt™; supports four independent displays; Max resolution: 5K@60Hz (Thunderbolt); 4K@60Hz (HDMI)								bolt™; [°]	,			Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole, slim tip AC adapter *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed		
Chipset Memory				46 Chip MHz D		dual-cha	annel cap	able, t	wo DD	R4 SO	-DIMM s	sockets	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter		
Display	Size	Resolu	tion		Туре	Surface	Brightn			Contrast Ratio	Color Gamut	Viewing Angle		Optional: ThinkPad Ethernet Extension Cable		
	15.6"	FHD (1	920x1	080)	IPS	Anti-glaı	e 300 n	its	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 (1 Dolby \	920x1≀ /ision™	080) 4 HDR	IPS	Anti-glaı	e 500 n	its	16:9	1200:1	72% NTSC	170°	Audio support H st op	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / 		
	15.6"	UHD (3 Dolby \	8840x2 /ision l	160) HDR	IPS	Anti-glaı	e 500 n	its	16:9	1200:1	100% Adobe	170°		optional dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system		
		UHD (3 Dolby \ Multi-to	/ision H		OLED	Anti- reflectio Anti- smudge	(neal	00niť	16:9	00000:1	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)	anti-r	eflection	ń (AF		smud	ipports ge (AS)	10-finger	gestur	e (UHI	D OLEI	only),			Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology		
Pen (optional) Storage	Up to	two M.2	2 SSD	Special PCIe N\		,,							Fingerprint reade Color calibration NFC	er Touch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only) None		
RAID (optional) Optical		0/1 รเ											Battery Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 14 hr		
Ethernet							V (<i>Non-v</i> rnet Exter			LM (<i>vP</i>	?ro))		AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter		
WLAN (optional) Bluetooth™							x + Bluet			n adant	or		· · · · · · · · · · · · · · · · · · ·	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:		
WWAN SIM card	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter None None									σαυαρι	.01		Limited warranty	1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service		
													Mil-Spec test	MIL-STD-810G military testing		
													Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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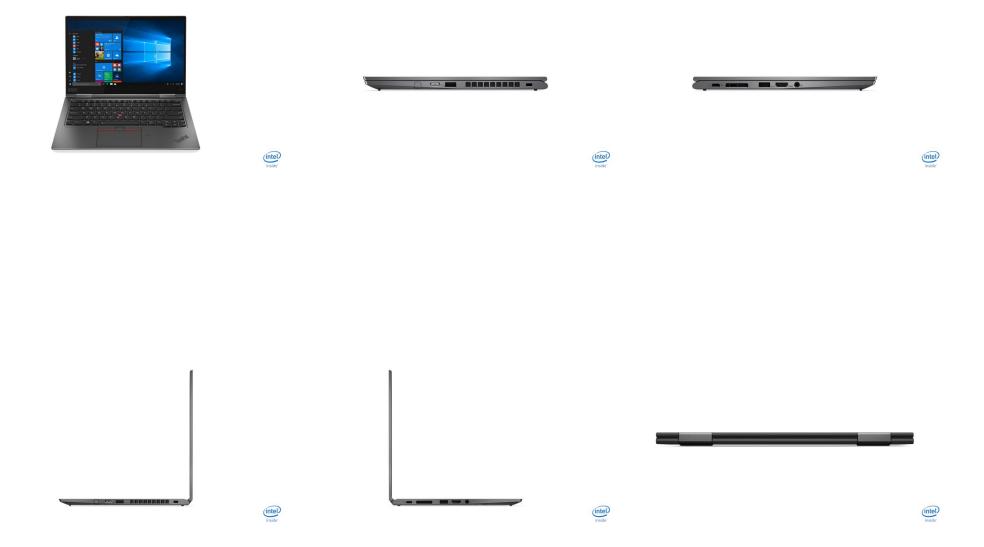






ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Smart card reade	urNone		
	Processor # of # of Number Cores Threads Frequency Frequency Cache Memory Types Graphics Intel HD	Media reader Ports	MicroSD card reader, supports UHS-II Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (Power Delivery, DisplayPort, Data		
	i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Graphics 620		transfer), HDMI 1.4, Ethernet extension connector, nano-SIM card slot (WWAN models),		
	8th Generation Intel Core i5 / i7 Processor		headphone / microphone combo jack, microSD card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	Processor Wumber Cores Threads Frequency Frequency Cache Graphics 15-8250U 1.6 GHz 3.4 GHz 6MB	WiGig dock Monitor cable (optional)	None HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter		
	1.7 GHz 3.6 GHz 6MB LPDDR3-2133 Intel UHD Graphics 620 1.8 GHz 4.0 GHz 8MB LPDDR3-2133 Graphics 620 1.8 GHz 4.0 GHz 8MB LPDDR3-2133 Graphics 620 1.8 GHz 4.0 GHz 8MB LPDDR3-2133 1.8 GHz Camera (optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter 1) One of the following, configurable by model: 720p: HD720p camera with ThinkShutter camera privacy, fixed focus			
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;	Audio support	IR & 720p: IR camera and HD720p camera, fixed focus * WWAN models and HDR panel models can not support IR camera HD Audio, Realtek® ALC3286 codec, Dolby® Audio™ Premium / stereo speakers, 1W x 2 /, 360° Noise-cancelling Dual Array Far Field,		
Chipset Memory	Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	 Keyboard UltraNav™	headphone / microphone combo jack 6-row wave keyboard (rise & fall), spill-resistant, multimedia Fn keys, LED backlit TrackPoint® pointing device and 3+2 buttons multi-touch clickpad		
Display	Some: 14.0" (355mm) FHD (1920x1080), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, IPS, AR (anti-reflection)	Security Security chip System Mgt (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology		
	Some: 14.0" (355mm) WQHD (2560x1440), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle,	NFČ (optional)	rTouch style match on chip fingerprint reader on the palm rest Near Field Communication		
	IPS, AR (anti-reflection) Some: 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, LED backlight, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle, IPS, AR (anti-reflection)	Battery Max battery life	Integrated Li-Ion 54Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 15.4 hrs		
Multi-touch	Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge), supports 10-finger gesture, reduces overall display brightness by 10%	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
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	Light sensor G-sensor Gyroscope GPS	Ambient Light Sensor 3D accelerometer 3D gyrometer		
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)	Preload	GPŠ function is integrated into WWAN module Windows® 10 Pro 64		
Optical	Some: M.2 SSD / PCIe NVMe, PČIē 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) None	Limited warranty	One of the following, configurable by model:		
Ethernet	Native Intel Ethernet Connection WGI219-LM (<i>vPro</i>) via optional ThinkPad Ethernet Extension Cable	(optional)	1-year depot repair service 1-year depot with 2-year system board service 3-year/1-yr battery depot repair service		
WLAN	One of the following, configurable by model: Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card	Mil-Spec test	3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service MIL-STD-810G military testing		
Bluetooth™	 Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter 	Environment	EPEAT™ Silver; ENERGY STAR®; RoHS-compliant		
WWAN (optional) SIM card (opt)	Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card				
Dimensions Weight Case color Case material	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb / 1.4kg Black or silver Display cover: Carbon-Fiber and Glass-Fiber hybrid; Bottom: magnesium-PPS hybrid				
	•		Lenovo		



ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor	8th Generation Intel®	Core	™ i5 / i7 Proce	essor					WWAN (optional)	One of the following, configurable by model:	
	Processor # of # Number Cores Three	of eads F		Turbo quency Cach	e Mem	ory Types	Proce Grap	essor ohics		 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 	
	i5-8265U	_		GHz 6ME	_				SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card	
	i5-8365U i7-8565U 4	× –		GHz 6ME GHz 8ME	— 11 21 11	DR3-2133	Intel UHD Graphics 620		Dimensions	WxDxH (Privacy Guard): 12.71" x 8.58" x 0.63"; 323mm x 218mm x 15.95mm	
	i7-8665U						Grapin	00 020	Weight	WxDxH (other model): 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24 lb / 1.47 kg;	
	or 10th Generation Ir			essor (NOT	availa	ble in EM	IEA)			Other model: starting at 2.99 lb / 1.36 kg	
		of		x Turbo Cach	ne Mem	ory Types		essor	Case color Case material	Iron Grey Display cover: Aluminium:	
	Number Cores Three	eads	· /	quency Cacr 2 GHz 6ME		1019 19900	Grap	ohics	- Case material	Bottom: Magnesium	
	i7-10510U 4	8		GHz 8ME	_	DR3-2133		UHD	Smart card reade		
	i7-10710U 6 1	12	1.1 GHz 4.7	7 GHz 12M	В		Grap	ohics	Media reader Ports	None Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3	
Graphics	Intel UHD Graphics 6								1	(with the function of Power Delivery and DisplayPort), HDMI 1.4b,	
	supports external dig supports three indep	gital m	onitor via HDN	MI or USB T	ype-C	/Thunder	bolt;			Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole	
	Max resolution: 5K@); 4K@24H	z (HDN	ΛI)			Monitor cable	Depending on many factors, actual data transfer speed may be lower than theoretical spee	
Chipset	Intel SoC (System on Chip) platform								Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2	
Memory	8GB or 16GB / 2133	MHz L	PDDR3 / solo	dered to sys				T	Camera (optional	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focu	
Display	Size Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle			
	14.0" FHD (1920x1080) Low Power	/ IPS	Anti-reflection Anti-smudge	400 nits	16:9	800:1	72%	170°	Audio support	HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 /	
	FHD (1920x1080 14.0" ThinkPad Privacy Guard			400 nits	16:9	1000:1	72%	170°	Keyboard	four 360° far-field microphones, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad	
	14.0" WQHD (2560x1440)	IPS	Anti-reflection Anti-smudge	300 nits	16:9	800:1	72%	170°	UltraNav™ Security	Power-on password, hard disk password, supervisor password, security keyhole	
	UHD (3840x2160))	Anti-reflection	1 500 -: 4-	100		000/	170°	Security chip	Discrete TPM 2.0, TCG Certified Intel vPro Technology	
	14.0" HDR 400, Dolby Vision™	IPS	Anti-smudge	500 nits	16:9	1400:1	1400:1 90%		Fingerprint rèadéi	rTouch style match on chip fingerprint reader on the palm rest	
Multi-touch	Capacitive-type multi AR (anti-reflection) /				ure,				NFČ <i>(optional)</i> Battery	Near Field Communication Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr)	
	could reduce the brig	ghtnès							Dattery	with 65W AC adapter	
Hinge Convert-mode	Yoga hinge, 360 deg Laptop, tent, stand a	ree	alot						Max battery life	MobileMark® 2014: 18.1 hr * Battery life varies significantly with settings, usage, & other factors	
Pen	ThinkPad Pen Pro, a			ouch display	, on-bo	ard recha	argeable	е	AC adapter	45W, 65W, or 65W slim USB-C AC adapter	
Storage	One of the following, co								Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
	 M.2 2280 SSD / SA M.2 2280 SSD / PO 									1-year depot repair service 1-year depot with 2 year quater board repair continue	
	 Intel Optane™ SSD) / PCI	le NVMe 3.0 x						(optional)	 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 	
Optical	Intel Optane Memo A 2220 PCIo NIV			tate Storage	9,					3-year/1-yr battery limited onsite service	
Optical M.2 2280, PCIe NVMe 3.0 x 4 None									Mil-Spec test	MIL-STD-810G military testing	
Ethernet	Native Intel Ethernet via optional ThinkPac					9-LM (<i>vPi</i>	ro)		Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant	
WLAN	Intel Wireless-AC 956								1		
Bluetooth™	Bluetooth 5.0 wireles	ss, inte	egrated in Wi-F	Fi + Bluetoo	th com	bo adapte	er				

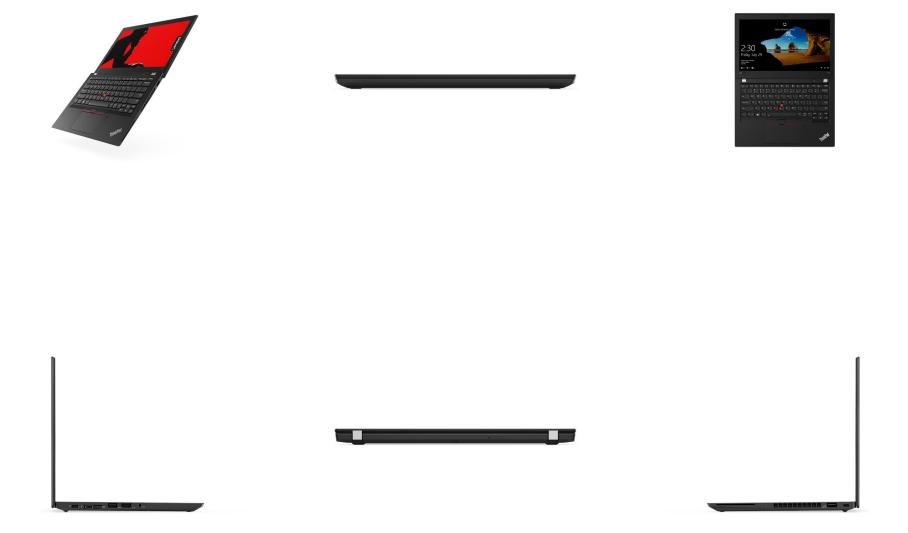






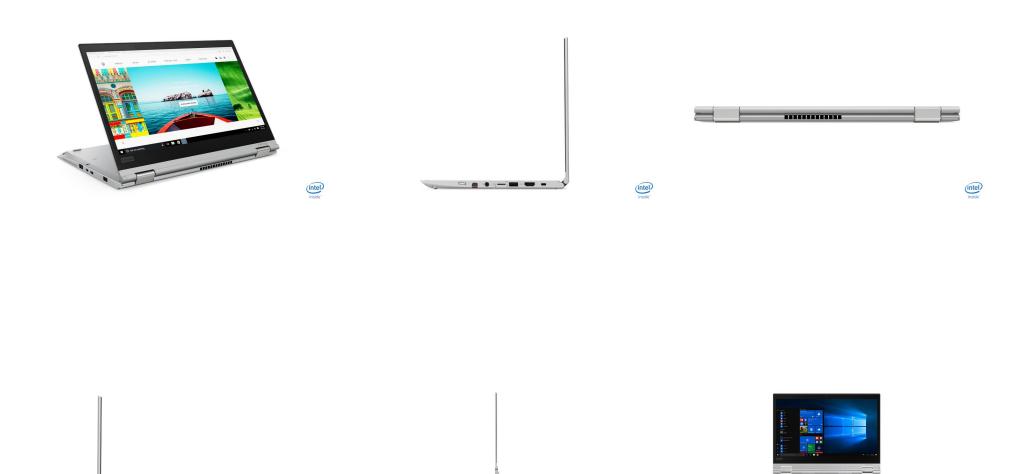
ThinkPad X270 Platform Specifications

Processor Fire Fi	Processor	6th Generation I	ntel® Cor	o™ i3 / i5 / i	7 Processor			Dimensions	WxDxH: 12.03" x 8.21" x 0.80"; 305.5mm x 208.5mm x 20.3mm			
Number Cores Threads Frequency Engagency Engagency Special Section Special Section Special Section S	1 10003301				Mary Trustee	Memory	Processor					
Second 2												
\$\frac{6-60000}{1,7-60000} \ 2 \ 4 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				2.0 GHz								
Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part Section Part								Case material	Display cover: Glass-Fiber Reinforced Plastic;			
Media reader Ministration Processor Frequency			4					0				
Post The Generation Intel Cord 31 is 1/3 ir Processor Processor Foliage Processor Processor Foliage Processor Processor Foliage Processor						-	520					
Wildles of the following configurable by more formed by the following states of the following configurable by more formed formed by the following states of the following configurable by more formed formed following the following configurable by more formed formed following the following configurable by more formed formed following configurable by more formed formed following configurable by more formed formed following configurable by more formed following configurable by more formed formed following configurable by more formed formed following configurable by more formed following configurable by more formed formed following configurable by more formed formed following configurable by more formed following configurable by more formed formed following configurable by more formed formed following configurable by more formed formed formed formed formed formed formed formed formed following configurable by more formed form						-						
Processor # of # of # of # of # of # of # of #			n Intol Co		· · · · · · · · · · · · · · · · · · ·				USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
Number Cores Treated Frequency Englancy Strong Composition					Max Turbo	Memory	Processor					
Monitor cable Monitor cabl									ThinkPad WiGig dock, mutually exclusive with WWAN (US only)			
Signature Section Se		i3-7100U										
F-3900 2 4 2.6 GHz 3.5 GHz 4MB 2.8 GHz 3.9 GHz 4MB 2.8 GHz 3.9 GHz 4MB 3.2 GHz 4MB 4				2.5 GHz			Intel HD Graphics	(optional)				
Signature 1.7-75000 2.7 GHz 2.5 GHz 2.4 MB 2.5 GHz 2			4			DDR4-2133		Camera (ontiona				
Intel HD Graphics \$20 or 620 in processor; supports actern all digital monitor via HDMI or USB Type-C; supports actern all digital monitor via HDMI or USB Type-C; supports even endependent displays; Max resolution: 4058c2160 €0Hz (USB Type-C); 4056c2160 €24Hz (HDMI) Scorning HDMI or USB Type-C; 4056c2160 €24Hz (HDMI) Scorning HDMI or USB Type-C; 4056c2160 €24Hz (HDMI) HDMI or USB Type-C; 4056c2160 €24Hz (HDM									HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /			
supports external digital monitor via HDMI or USB Type-C; 4096x2160 @ 24Hz (HDMI) Chipset in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the Soc (System on Chip) platform in the System on Chip) platform in the System on Chip platf												
Supports three independent displays; Max resolution: 4096x1606 901± (USB Type-C); 4096x2160 @ 24Hz (HDMI) Max resolution: 4096x1606 @ 04Hz (USB Type-C); 4096x2160 @ 24Hz (HDMI) Max resolution: 4096x1606 @ 04Hz (HDMI) Max resolution: 4096x1606 @ 0	Graphics					C.						
Max resolution: 4096x2160@60H2 (USB Type-C): 4096x2160@24H2 (HDMI) Chipset Memory Intel SoC (System on Chip) platform 16GB max / 2400MH2 DDH4, one DDH4 SO-DIMM socket System doctors with owner memory controller Display Some: 12.5" (317.5mm) HD (1366x788) anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) HD (1366x788) anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) FHD (1950x188), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 5001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) FHD (1950x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 7001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) FHD (1950x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 7001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) FHD (1950x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 7001 contrast ratio, 1702 viewing angle Some: 12.5" (317.5mm) FHD (1950x1080), anti-glare, LED backlight, IPS, 300 mils, 169.3 spect ratio, 7001 contrast ratio, 1702 viewing angle Molli-flow (pdf) On-cell touch, supports 10-finger gesture (FHD only) Storage Storage Storage System has one HDD stor one M2 ±2280 storage some: SSD / SATA 6.005bis, 2.5" wide, 7mm high (e.g. xoxGB SSD) Some: M2 SSD / PCIe NVMe, PCie 3.0 x 2, 166b/s Some: M2 SSD / SATA 6.005bis, 2.5" wide, 7mm high (e.g. xoxGB SSD) Some: M2 SSD / SATA 6.005bis, 2.5" wide, 7mm high (e.g. xoxGB SSD) None Ethernet None-VPro model: Intel Ethernet Connection 1219-V (Jacksonville) Possible Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (Problem on Maximum (ie-C;						
Chipset Memory 16GB mar (2400MHz DDHA, one DDH4 SO-DIMM socket 'System clocks down for processors with lower memory controller Display Some: 125 (317.5mm) HD (1366XF88), anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 500:1 contrast ratio Some; 125 (317.5mm) HD (1366XF88), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Storage Some: 1125 (317.5mm) HD (1366XF88), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratio, 800:1 contrast ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-linger gesture (FHD only) Multi-touch (opt) On-cell touch, supports 10-linger gesture (FHD only) Storage System has one HDD sot or one Mz 2280 slot exclusively for storage Some: 180D / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in WWAN (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage, None: 128GB Mz SSD) / SATA 6.0Gb/s, in Wwan (slot as 2nd Storage) / SATA 6.0Gb/s, in Wwan (slot as						96x2160@	24Hz (HDMI)		Power-on password, hard disk password, supervisor password, security keyhole			
Memory 16GB max / 2400MHz DDR4, one DDR4 SD-DIMM socket System locks down for processors with lower memory controller NFC (optional)	Chipset	Intel SoC (Syste	m on Chi	p) platform								
Some: 12.5" (317.5 mm) HD (1366x769), anti-glare, LED backlight, 200 nits, 169 aspect ratio, 5001 contrast ratio and 12.5 (31.5 mm) HD (1366x769), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 5001 contrast ratio and 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 700° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 700° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 700° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 700° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 700° contrast ratio and to 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5" (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° (317.5 mm) FHD (1390x1080), and 150 ratio, 170° v	Memory		16GB max / 2400MHz DDR4, one DDR4 SO-DIMM socket					Fingerprint reade	Optional: Touch style match on chip fingerprint reader on the palm rest			
220 nits, 16:9 aspect ratio, 500:1 contraist ratio Some: 12:5" (317.5mm) HD (1366×768), anti-tigare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 800:1 contraist ratio, 170° viewing angle Some: 12:5" (317.5mm) FHD (1920×1080), anti-tigare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contraist ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD stot or one Mz 2280 sot exclusively for storage Some: 10D / SATA 6, 0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: 126GB Mz 2SD / PCR 0.3 v 2.1 (56g). Some: 126GB Mz 2SD / SATA 6, 0Gb/s, 10 WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig None Ethernet Non-vPro model: Intel Ethernet Connection 1219-V (Jacksonville) vPro model: Intel Ethernet Connection 1219-LM (Jacksonville) wPro model: Intel Ethernet Connection 1219-LM (Jacksonville) 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8265, WiGig 802.11ac + BT4.1 1 intel Tir-Band Wireless-AC 8265, WiGig 802.11ac + BT4.1 1 intel Tir-Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless-AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band Wireless AC 8260, Wi-Fi 2x8 802.11ac + BT4.1 1 intel Dual Band W	D: 1		•					1— <i>' '</i>				
Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, IPS, 300 nits, 16.9 aspect ratio, 800-1 contrast ratio, 170° viewing angle (MobileMark® 2014) Max battery life (S.52 hr 13.04 hr 20.1 hr 26.9 hr 3.00 nits, 16.9 aspect ratio, 70° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD stor one M2 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) Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and Wice Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN slot saccount slot specific with sl	Display	Some: 12.5" (3"	17.5mm) 16:9 asr	HD (1366X) ect ratio 50	/68), anti-glare, L 00:1 contrast ratio	.ED backligi	nt,	External battery Max battery life				
Some: 12.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 12.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 12.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), anti-c confrast ratio, 170° viewing angle some: 14.5° (317.5 min) FHD (1920x1080), and the some some some: 14.5° (317.5 min) FHD (1920x1080), and the some some some some some some some som		Some: 12.5" (3	17.5mm)	HD (1366x)	768), anti-glare, L	ED backlig	nt, IPS,					
Multi-louch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD is ATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig None Ethernet Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-LM (Jacksonville) VPro model: Intel Ethernet Connection I219-LM (Jacksonville) Peatlerk* RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Toul Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Soul Band Wireless-AC 18265, Wi-Fi 2x2 8		300 nits,	16:9 aśp	ect ratio, 8	00:1 contrast ratio	o, 170° view	ing angle		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Multi-louch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one H/DD solor or one M.2 2280 side exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: N.2 SSD / PCIle NVMe, PCIle 3.0 x 2.1 Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonvill												
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: M.2 SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ Some: M.2 SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high, 4.0 xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. xxxGB SSD) Some: M.2 SSD / SATA 6.0Gb/s, 1.0 mWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN One of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Windows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warranty None of the following, configurable by model: Nindows 10 Pro 64 Limited warran	Multi-touch (opt)					o, i/o view	ing angle	AC adapter	45W slim tip AC adapter or 45W USB Type-C AC adapter			
Some: SSD / SATA 6.OGb/s, 2.5" wide, 7mm high (e.g. xxxxGB SSD) Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: M.2 SSD / SATA 6.OGb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) **Neattek* RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Dual Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Dual Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel Tri-Band Wireless-AC 8266, Wi-Fi 2x2 802.11ac + BT4.1 **Intel M265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS* WWAN (optional) **One of the following, configurable by model: **Intel Roll option repair service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **1-year/1-yr battery limited onsite service **3-year/1-yr battery limited onsite service **3-year/1-yr battery lim	Storage	System has one H	DD slot or	one M.2 228	0 slot exclusively for	r storage						
Some: M.2 SSD / SCH NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Substant A 1 wireless, integrated in Wi-Fi + Bluetooth combo adapter 'Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model: **Windows 10 Home 64* **Windows 10 Pro 64* **Undows 10 Pro 64* **Windows 10 Pro 64* **Windows 10 Pr	ū								Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64			
Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) vPro model: Intel Ether							SD)					
Dotical None Ethernet Non-VPro model: Intel Ethernet Connection I219-V (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Reatlek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1 • Intel Intel Bards /							torage.					
Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless, integrated in Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integ XM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card		mutually				0. 40	itorago,	Limited warranty	One of the following, configurable by model:			
## Pro model: Intel Ethernet Connection I219-LM (Jacksonville) ## WLAN ## One of the following, configurable by model (WiGig is mutually exclusive with WWAN): ## Realtek* RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 ## Intel Buetooth 1.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter ## Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS ## WWAN (optional) ## One of the following, configurable by model (mutually exclusive with WiGig): ## Wireless WAN upgradable ## Integrated Mobile Broadband 4G LTE-A, ## Qualcomm* Snapdragon** X7 LTE-A (Sierra Wireless EM7455) ## Integrated Mobile Broadband 4G LTE-Intel XMM** 7160 (Fibocom L831-EAU) (EMEA only) ## SIM card (opt) ## Micro-SIM card slot, opt Verizon LTE (US) or Lenovo** Connect (EMEA) SIM card ## Connection** ## Connection** Connection** ## 3-year/3-yr battery limited onsite service ## MIL-STD-810G military testing ## EPEAT** ## MIL-STD-810G military testing ## Environment ## One of the following, configurable by model (mutually exclusive with WWan) ## One of the foliowing, configurable by model (mutually exclusive with WWan) ## One of th	Optical							_				
WLAN One of the following, configurable by model (WiGig is mutually exclusive with WWAN): Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tirl-Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card * 3-ýear/3-ýr batterý limited onsite service Mil-STD-810G military testing Ervironment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Ervironment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment EVEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment Eveat™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment Eveat™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment Eveat™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment Eveat™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Enviro	Ethernet		: Intel Eth	ernet Conr	nection I219-V (Ja	cksonville)	`					
• Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tir-Band Wireless-AC 18265, Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth ™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	14/1 441						,	_				
• Intel Dual Band Wireless-AC 8260, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 • Intel Tri-Band Wireless-AC 18265, WiGig 802.11ad + Wi-Fi 2x2 802.11ac + BT4.1 (US only) Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	WLAN					y exclusive w	ith vvvvAN):	Mil-Spec test	MIL-STD-810G military testing			
Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + BT4.1 Intel Tri-Band Wireless-AC 18265, WiGig 802.11ac + BT4.1 (US only) Bluetooth ⁴ 1 wireless, integrated in Wi-Fi + Bluetooth combo adapter Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card						ac + BT4.1		<u> </u>	, 3			
Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card		 Intel Dual Band 	d Wireles	s-AC 8265,	Wi-Fi 2x2 802.11	ac + BT4.1						
Bluetooth™ Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter * Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card			Vireless-	AC 18265, V	ViGig 802.11ad +	Wi-Fi 2x2	302.11ac + BT4.1					
* Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model (mutually exclusive with WiGig): • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card	Bluetooth™	Bluetooth 4.1 wi	reless. in	tegrated in	Wi-Fi + Bluetooth	combo ada	pter					
 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card 		* Intel 8265ac / 18	265ac car	d support BT	4.2 but is limited to E	3T4.1 by Win	dows OS					
 Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card 	WWAN (optional)				el (mutually exclusiv	e with WiGig) <i>:</i>					
Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455) • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card					ΤΕ-Δ							
• Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU) (EMEA only) SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card		Qualcomm® Sr	napdrago	n™ X7 LTE	- A (Sierra Wireles	ss EM7455)					
SIM card (opt) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo Connect (EMEA) SIM card		 Integrated Mobility 	oile Broad	lband 4G L	TE,		•					
	SIM card (ant)						MEA) CIM og "d					
	Glivi Caru (<i>Opt)</i>	iviicio-Siivi card	siot, opt \	enzon Li E	(US) OF LeftOVO®	Connect (E	ivica) Silvi card		1			



ThinkPad X280 Platform Specifications

Processor				e™ i3 / i5 P n US and El		DU is NC	T available ir	n 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	# of Threads	Base	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HD non-touch model: 2.78 lb / 1.26 kg; FHD multi-touch model: 2.79 lb / 1.27 kg			
	i3-7020U i3-7130U	2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics	Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch model) or Glass Fiber (HD & FHD multi-touch model);			
	i5-7200U i5-7300U		4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB	DDN4-2133	620	Current count up ada	Bottom: Magnesium/Aluminum			
		neration	n Intel Co	ore i3 / i5 /					Media reader	er Optional: Smart card reader MicroSD card reader, in the combo slot with nano-SIM card			
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),			
	i3-8130U i5-8250U	2	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB				HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,			
	i5-8350U i7-8550U i7-8650U	4	8	1.7 GHz 1.8 GHz 1.9 GHz	3.6 GHz 4.0 GHz 4.2 GHz	6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620		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			
Graphics	Intel HD G	externa	ıl digital r	Intel UHD nonitor via	Graphics 6 HDMI or U	20 in p	rocessor; e-C;	1	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 Optional: ThinkPad Ethernet Extension Adapter Gen 2			
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)							30Hz (HDMI)	Camera (optional) One of the following, configurable by model:				
Chipset Memory	Intel SoC (System on Chip) platform 4GB, 8GB, or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * 4GB memory is NOT available in US and EMEA * System clocks down for processors with lower memory controller								 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	Some: 12.5" (317.5mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio									dual array microphone (optional for special bid model), headphone / microphone combo jack			
Multi-touch (opt)	Some: 12.5" (317.5mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle On-cell touch, supports 10-finger gesture (FHD only) * FHD non-touch model is NOT available in US								Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	_					- Ciny,				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, anti-spoofing technology			
Storage	M.2 SSEM.2 SSE) / SAT	A 6.0Gb/	rable by mod 's (e.g. xxx0 PCIe 3.0 x	GB SSD M		xxGB SSD	M.2 PCIe NVMe)					
Optical Ethernet	None Native Inte	ol Ethan	rnat Can	naation IO1	0 V (Non)	(Dra) a	1010 I M /	(Dra)	NFC (optional)	Near Field Communication			
	via bundle	d or op	otional Th	ninkPad Eth	nernet Exte	nsion A	r I219-LM (ı Adapter Ger	1 2	Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter			
WLAN + Bluetooth™ (opt)	Intel Dual * Intel 8265	Band V Sac card	Vireless- Supports	AC 8265, V BT4.2 but is	Vi-Fi 2x2 8 limited to B	02.11ac 7 <i>4.1 by</i> 1	+ Bluetoot Vindows OS	h 4.1, M.2 card	Max battery life AC adapter	MobileMark® 2014: 16.6 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB-C AC adapter			
WWAN (optional)				ole (special Iband 4G L					<u> </u>	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64			
SIM card (opt)	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, optional Verizon LTE (US) SIM card					ırd VWAN ι	ıpgradable		Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year/3-yr battery depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery depot repair service 3-year/3-yr battery limited onsite service 3-year/3-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 Lenovi			



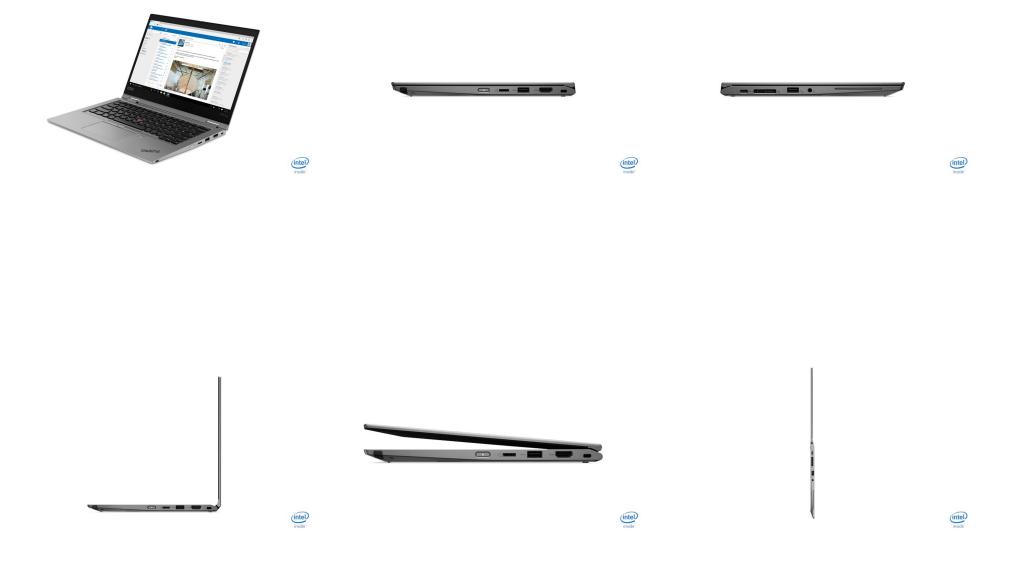
ThinkPad X380 Yoga Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor									rOptional: Smart card reader (mutually exclusive with NFC)
	Processor Number i5-7200U		# of Threads	Base Frequency 2.5 GHz	Max Turbo Frequency 3.1 GHz	Cache 3MB	Types	Processor Graphics Intel HD Graphics	Media reader Ports	One microSD card slot (microSD, microSDHC, microSDXĆ), UHS-I Two USB 3.1 Gen 1 (one Always On), Ethernet extension connector, one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (Power Delivery, DisplayPort, Data
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	620		transfer), HDMİ 1.4b, microSD card reader, nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader
	or 8th Gen	neration	Intel Co	re i3 / i5 / i	7 Process	or				* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Processor Number i3-8130U			Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	WiGig dock Monitor cable <i>(optional)</i>	None USB-C to VGA: Lenovo USB-C to VGA Plus Power Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	i5-8250U i5-8350U	2	4	2.2 GHz 1.6 GHz 1.7 GHz	3.4 GHz 3.4 GHz 3.6 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics	Camera	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter One of the following, configurable by model:
	i7-8550U i7-8650U	4	8	1.8 GHz 1.9 GHz	4.0 GHz 4.2 GHz	8MB 8MB	DDR4-2400	620	Audio support	720p: HD720p camera, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus HD Audio, Conexant® CX11771 codec / stereo speakers, 2W x 2 /
Graphics	Intel UHD									optional dual array microphone, headphone / microphone combo jack
	supports to	hree in	depende	nt displays	;	,,	*	30Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and 3+2 buttons Mylar surface multi-touch click pad
Chipset Memory	Intel SoC (8GB or 16	(Syster	n on Chi _l 100MHz	p) platform DDR4 / so	Idered to s	vstemb	oard, no so	ckets	Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest
Display	13.3" (337	.8mm)	FHD (19	20x1080),	LED back	ight, IP	S			Near Field Communication (mutually exclusive with smart card reader)
	AR (anti-re			, 800:1 cor	ntrast ratio,	1/0° V	iewing angl	e,	Battery Max battery life	Li-lon 51Wh battery MobileMark® 2014: 13.6 hrs
Multi-touch	Capacitive supports 1	-type n 0-finge	núlti-touc er gesture		i-reflection), AS (a	inti-smudge),	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W AC adapter (slim tip), 45W or 65W USB Type-C AC adapter
Pen	Yoʻgʻa hinge, 360 degree Laptop, tent, stand, yoga and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable								Light sensor G-sensor/ eCompass	Ambient Light Sensor 3D accelerometer and 3D magnetometer 3D compass
Storage	Some: M.						0 0 000C C	SSD PCIe NVMe)	Gyroscope	3D gyrometer
Optical	None None	2 330	/ PCIE N	vivie, PCIE	3.0 X 4, 3	200/5 (e.g. xxxG S	SD FCIE INVIVIE)	- 	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet	Native Inte						์ I219-LM (เ	/Pro)	Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board service
WLAN Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Bluetooth 4.2 wireless, integrated in Wi-Fi + Bluetooth combo adapter									 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WWAN (optional)	One of the f					1 000	ED M.O	(Mil-Spec test	MIL-STD-810G military testing
SIM card (opt)	 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 Nano-SIM card slot 								Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant
Dimensions Weight Case color	WxDxH: 12.34" x 8.75" x 0.72"; 313.5mm x 222.2mm x 18.2mm Starting at 3.17 lb / 1.43kg Black or silver									
Case Material	Carbon-Fil		orid							
										l enovo



ThinkPad X390 Platform Specifications

Fig. 2016 Fig. 2	Processor	8th Ge	neration	Intel® Co	ore™	i3 / i5 / i	7 Processo	r				Dimensions	Models	FHD Non-tou	ch	HD /	FHD Multi-touch	
S-2825U								Cache					Carbon Fiber				-	
Processor Fig. Fi				4	_								PPS					
17-8666U 1-9 14 6 15 17 8 18 19 18 18 15 18 18 18 17 18 18 18 18				l e	1	.6 GHz	4.1 GHz	6MB	DDR4-2400			Weight	Models	FHD Non-touch	Н	D	FHD Multi-touch	
age color Processor February Processor February Processor February Processor February Processor February Febr			J	"							20			2.70 lb / 1.22 kg		-	-	
Processor # of # of Base Max Turno Cache Marroy Processor Garphics G													_					
Number Cores Threads Frequency Cache Minute The Section Cores Threads Frequency Cache Minute The Section Cache Minute Minute Cache Minute Cache Minute Minute Cache Minute Minute Cache Minute M								NOT a									.	
Media reader MicroSD card reader, in the combo slot with nano-SIM card Forty F		Numbe	Core		s Fre	equency	Frequency						Bottom:	Magnesium/Aluminu		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 	
Two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Di one USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Disorder of the USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Disorder of the USB 3.1 Type-C Gen 2 (*Thunderbolt) (with the function of Power Delivery and Disorder of Power Delivery and Disorder of Power Delivery and Disorder of Power Delivery and Disorder of Power Delivery and Delivery and Delivery and Delivery and Delivery and Delivery and Delivery and			4	8											lot with nar	no-SIM card	ı	
Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports triven independent displays: Max resolution: 4096x204@ 600Hz (Thunderbolt); 4096x2160@ 24Hz (HDMI) Chipset Memory Hollway (System on Chip) platform Memory AGB, 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets / 32GB memory is NOT available for models with 10th Gen processor / Installed memory is actually 2660MHz but run at 2400MHz due to intel limitation Display Size Resolution: 1995 surface Size Resolution Type Size Resolution Type Surface Size Resolution Type Size Resolution Type Size Resolution Type Size Resolution Type Surface Size Resolution Type				12	_				DDR4-2400	Intel UHL	Graphics		Two USB 3.1 (Gen 1 (one Always On	١.			
Memory 4GB, 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets 3GB memory is NOT available for models with 10th Gen processor installed memory is actually 2666MHz but not at 2400MHz due to intel limitation Display Size Resolution Type Surface Brightness Aspect Contrast Ratio Ratio Gamut Viseving Gamut V	Graphics	Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;								24Hz (HC	OMI)		HDMI 1.4b, Etl combo slot of i headphone / m	hernet extension conn nano-SIM card (WWAI nicrophone combo jack	ector, N models) a k, optional s	and microSI	O card reader,	
Size Resolution lype Surface Brightness Ratio Ratio Ratio Gamut Angle 13.3" HD (1366x768) TN Anti-glare 250 nits 16:9 500:1 45% 90° 800:1 13.3" HD (1920x1080) IPS Anti-glare 250 nits 16:9 500:1 45% 90° 13.3" FHD (1920x1080) IPS Anti-glare 300 nits 16:9 (non-touch) 700:1 (multi-touch) 700:1 (multi-touch) 700:1 (multi-touch) 700:1 (multi-touch) 700:1 (multi-touch) 72% 178° (glard Privacy) IPS Anti-glare 400 nits 16:9 1000:1 72% 178° (glard Privacy) IPS Anti	Memory	4GB, 8 * <i>32GB</i>	GB, 16G memory i	B or 320 s NOT av	3B / 2 ailable	2400MHz e for mode	els with 10th (ien pro	ocessor		o sockets	* Depending on many factors, actual dafa transfer speed may be lower than theoretical s Monitor cable (optional)					wer than theoretical speed	
13.3° HD (1366x768) TN Anti-glare 250 nits 16:9 500:1 45% 90° 170°	Display	Size R	esolution		Туре	Surface	Brightness					l)∙ HD720p cam	nera with ThinkShutter	camera pri	vacv. fixed t	focus	
stereo speakers. 1W x 2, Dolby* Audio™ Premium / dual array far-field microphone (optional for special bid model), headphone / motional for special bid model), headphone / microphone combo jack FHD (1920x1080) 13.3" FHD (1920x1080) 10.0" 13.3" FHD (1920x1080) 13.		13.3" H	D (1366x	768)	TN	Anti-glare	250 nits	16:9		45%	90°	 IR camera and HD720p camera with ThinkShutter camera p 			a privacy, fixed focus			
13.3" ThinkPad Privacy IPS Anti-glare 400 nits 16:9 100:1 72% 178° ReyDoard UltraNav™ TrackPoint*® pointing device and buttonless Mylar surface multi-touch to Security Storage M.2 2280 SSD / SATA 6.0Gb/s M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 System Mgt (opt) System Mgt (opt) System Mgt (opt) Security			,	,	IPS	Anti-glare	e 300 nits	16:9	(non-touch 700:1	12%	170°	Audio support	stereo speaker dual array far-f	rs, 1W x 2, Dolby® Aud ield microphone (optic	lio™ Premiu nal for spec		del),	
Storage * M.2 2280 SSD / SATA 6.0Gb/s * M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 * Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe, PCIe 3.0 x 4 Optical * None * Intel Optional Touch Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 * WLAN (optional) * Untel WirFi 6 AX200, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 eIntel WirFi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 * Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) eIntegrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) eIntegrated Mobile Broadband 4G LTE, Fibocom L850-GL, M.2 card 'For non-WMAN model, it means the model is NOT WMAN upgradable SIM card (opt) * M.2 2280 SSD / SATA 6.0Gb/s * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 * Integrrint reader Optional: Touch style match on chip fingerprint reader on the palm res NFC (optional) * Near Field Communication * Max battery life Ax adapter * AC adapter * AC adapter * AC adapter * AC adapter * Optional: Wax battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter * Operating system * Optional: Windows* 10 Home 64 or		13.3" T	nink̀Pad F		IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°						klight ulti-touch touchpad	
* M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 * M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 * Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) * Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Intel wir-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 * Intel grated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibocom L830-GB, M.2 card (EMEA only) integrated Mobile Broadband 4G LTE, A, Fibo	Multi-touch (opt)	On-cel	touch, s	upports	10-fi	nger ges	ture (FHD	only)							ord, super	visor passw	ord, security keyhole	
Optical None Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) Bluetooth™ (opt) Bluetooth™ (opt) WWAN (optional) • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 8 with 65W AC adapter Max battery life Max battery life Adapter AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) • 1-year depot repair service • 1-year depot with 2-year system board repair service • 1-year limited onsite service • 1-year limited onsite service • 1-year limited onsite service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	Storage	• M.2 2	242 SSI 280 SSI	D / PCle D / PCle	NVN NVN	Ле, PCle Ле, PCle	3.0 x 4	torage				System Mgt (opt) Fingerprint reader	Intel vPro Tech r Optional: Touc	nnology ch style match on chip	fingerprint	reader on t	he palm rest	
Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) * Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth™ (opt) * Wireless WAN upgradable (special bid only in EMEA) * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card (EMEA only) * Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 * AC adapter * Operating system * Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty * 1-year depot repair service * 1-year depot with 2-year system board repair service * 1-year limited onsite service * 3-year/1-yr battery limited onsite service * 3-year/1-yr battery limited onsite service * 3-year/1-yr battery limited onsite service * 3-year/1-yr battery limited onsite service * Mil-STD-810G military testing		M.2 2	280, PC	le NVM	e 3.0	x 4	ond Otato O	iorago	,			Battery			orts Rapid	Charge (ch	arge up to 80% in 1hr)	
* Battery life varies significantly with settings, usage, & other factors via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN (optional) • Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 • Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 Bluetooth™ (opt) Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, *Mil-Spec test *Mil-STD-810G military testing *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) • 1-year depot repair service • 1-year limited onsite service • 3-year/1-yr battery limited onsite service • 3-year/1-yr battery limited onsite service Mil-STD-810G military testing									10101111	- ,		Max battery life						
* Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 * Bluetooth™ (opt)* Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter * WWAN (optional)* * Wireless WAN upgradable (special bid only in EMEA) * Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) * Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable * Nano-SIM card slot, in the combo slot with microSD card reader, * Wil-Spec test * Wil-STD-810G military testing*	Ethernet											'	* Battery life var	ries significantly with setti	ngs, usage, &	& other factor	s	
Bluetooth Moptional) WWAN (optional) Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE-A, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, Mil-Spec test MIL-STD-810G military testing	WLAN (optional)	• Intel \	Vireless-	AC 956), Wi	-Fi 2x2 8	02.11ac + E	Blueto	oth 5.0			l				0 Pro 64		
WWAN (optional) • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Tor non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, Will-Spec test • 1-year depot with 2-year system board repair service • 1-year limited onsite service • 3-year/1-yr battery limited onsite service • 3-year/1-yr battery limited onsite service • Mil-Spec test MIL-STD-810G military testing	Bluetooth™ (opt)									pter								
SIM card (opt) Nano-SIM card slot, in the combo slot with microSD card reader, All-Spec test MIL-STD-810G military testing		WirelIntegInteg	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA o Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card 									(optional)	1-year limite3-year/1-yr b	d onsite service attery depot repair ser	vice	service		
optional verizon LIE (US) SIM card Epiting and Epiting	SIM card (opt)	Nano-S	IM card	slot, in t	he co	ombo slo												
Environment El Exit doid, Envenda 31An 7.1, non 3-compliant		optiona	optional Verizon LTE (US) SIM card									Environment	EPEAT™ Gold	; ENERGY STAR® 7.1	; RoHS-con	npliant		



ThinkPad X390 Yoga Platform Specifications

Processor	8th Gene	ration I	ntel® Cor	e™ i5 / i7 F	rocessor					Dimensions	WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Proce Grapl		Weight Case color Case material	Starting at 2.85 lb /1.29 kg Black or silver (silver is NOT available in EMEA) Display cover. CF Hybrid PA + 50% GF
	i5-8265U i5-8365U i7-8565U i7-8665U	4	8	1.6 GHz 1.6 GHz 1.8 GHz 1.9 GHz	3.9 GHz 4.1 GHz 4.6 GHz 4.8 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD 62	Graphics 0		Bottom: CF Hybrid PA + 50% GF rOptional: Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
Graphics	supports	externa three ir	al digital i	nt displays	HDMI or U		e-C; 96x2160@2	24Hz (HDN	MI)		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Chipset Memory	Intel 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 Intel limitation						oard, no so lue to Intel lir	ockets nitation		Monitor cable (optional)	microSD card reader, side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Display	Size Reso	olution	T	pe Surface	Brightnes	Aspec Ratio	ct Contrast Ratio	t Color Gamut	Viewing Angle	Bundled Accy Camera (optional)	Optional: ThinkPad Ethernet Extension Adapter Gen 2) One of the following, configurable by model:
	13.3" FHD	3.3" FHD (1920x1080)									HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Multi-touch Hinge		smudge	e), could		s 10-finger brightness		e, anti-refle o 10%	ction (AR)	,	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
Convert-mode Pen	Laptop, te	nt, sta	nd and ta		ılti-touch di	splay, o	n-board red	chargeable	€	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	 M.2 228 Intel Op M.2 228 	12 SSD 30 SSD otane™	/ PCIe N / PCIe N	IVMe, PCI IVMe, PCI H10 with S		Storage),			Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
Optical	None									Battery	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Ethernet	via bundle	ed or o	ptional TI	inkPad Eth	nernèt Exte	/ <i>Pro</i>) or ension A	1219-LM (ı dapter Ger	vPro) n 2		Max battery life	with 65W AC adapter MobileMark® 2014: 14.5 hr * Battery life varies significantly with settings, usage, & other factors
WLAN (optional)	 Intel Wir 	reless-	AC 9560,		802.11ac +					AC adapter	45W, 65W, or 65W slim USB-C AC adapter
Bluetooth™ (opt)	Bluetooth	5.0 wi	reless, in	tegrated in		uetooth uetooth	5.0 combo ada	pter		Light sensor G-sensor Gyroscope	None 3D accelerometer 3D gyrometer
WWAN (optional)						m I 020	ER Maa	ard (EMEA	(value	'	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card for special bid only						50-GL, M.2 pgradable	2 card	,		One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/3-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Note: The specifica	ations above	e may r	not be ava	ilable in all	regions.						Lenovo



ThinkPad X395 Platform Specifications

Processor	AMD F	Ryzen™ P	RO Mob	ile Pr	ocessors	with Rad	eon™ Ve	ga Graphics	1		Dimensions	WxDxH: 12.28" x 8.55" x 0.67"; 311.9mm x 217.2mm x 16.9mm		
	Proces					1ax Turbo	Cache	Memory		essor	Weight	Models HD / FHD multi-touch FHD non-touch FHD Privacy Guard		
	Numbe Ryzen:	_	Threads			requency	2MB L2 /	Controller		ohics n Vega 6		Weight 2.91 lb / 1.32 kg 2.82 lb / 1.28 kg 3.01 lb / 1.37 kg		
	Pro 330		4	2.1	GHz :		4MB L3			ohics	Case color Case material	Black Display cover: PPS/GF;		
	Ryzen Pro 350		8	2.1	GHz :		MB L2 / 4MB L3	DDR4-2400		vega 8 ohics	Smart card reade	Bottom: Magnesium/Aluminum er Optional: Smart card reader		
	Ryzen Pro 370		8	2.3	3 GHz		MB L2 / 4MB L3		Radeon Grap	Vega 10 ohics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2,		
Graphics	suppor	ts exterr	naľ digital independ	l mor dent (iitor via U displavs:	a 10 Grapl JSB-C or I JSB-C); 4	HDMI;	rocessor; 60@24Hz (H	HDMI)			two USB 3.1 Type-C Gen 2 (w/ the function of Power Delivery and DisplayPort 1.4 HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole		
Chipset Memory	8GB or	· 16ĠB´/	2400MH	z DD	platform R4 / solo 66MHz bu	dered to sy	rstembo 10MHz du	ard, no sock le to AMD limi	ets itation		Monitor cable (optional) Bundled Accy	**Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2		
Display	Size F	Resolution		Туре	Surface	Brightnes	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		Optional: Think at Ethernet Extension Adapter Gen 2 () One of the following, configurable by model:		
	13.3" F	ID (1366x	768)	TN	Anti-glare	250 nits	16:9	300:1	45%	90°	''	HD720p camera with ThinkShutter camera privacy, fixed focus		
	13.3" F	HD (1920)x1080)	IPS	Anti-glare	300 nits	16:9	800:1 (non-touch) 700:1 (multi-touch)	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack 		
	13.3" T	HD (1920 hinkPad f Guard	x1080) Privacy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Multi-touch (opt)	On-cel	I touch,	supports	10-fi	nger ges	ture (FHD	only)				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified		
Storage			D / SATA								System Mgt	DASH Management		
Optical	• M.2 : None	2280 SS	D / PCIe	NVN	1e, PCIe	3.0 x 4					Fingerprint reade	r Optional: Touch style match on chip fingerprint reader on the palm rest None		
Ethernet	Native via bur	Realtekendled or o	RTL815	3 Giç Think	gabit Eth Pad Ethe	ernet conr ernet Exte	nection nsion A	dapter Gen 2	2		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter		
WLAN <i>(optional)</i> Bluetooth™						2.11ac + B Vi-Fi + Blu		5.0 combo adapt	er		Max battery life AC adapter	MobileMark® 2014: 14.5 hr *Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter		
WWAN (optional)					e by mode	l:						a Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
SIM card (opt)	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 Nano-SIM card slot, optional Verizon LTE (US) SIM card					gradable	ard		Limited warranty (optional)	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service				
											Mil-Spec test	MIL-STD-810G military testing		
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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

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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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Summary of Changes

This section describes the technical changes made in this edition.

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

October 30, 2019 - Version 550

Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

ThinkPad X1 Tablet (3rd Gen) - Spec updated

Withdrawals in this update

► Withdrawn product(s)

None





ThinkPad X1 Tablet (3rd Gen) Platform Specifications

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

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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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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.

March 2020 - Version 556

Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

ThinkCntre M630e Tiny update Mil-Spec information

ThinkCntre M90n-1 Nano update Storage information

ThinkCntre M90n-1 Nano IoT update Processor / Storage / Ethernet / etc. information

ThinkCntre M725 SFF update Graphics information

Withdrawals in this update

► Withdrawn product(s)

None

► Withdrawn model(s)

None

























ThinkCentre M820z Platform Specifications

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

















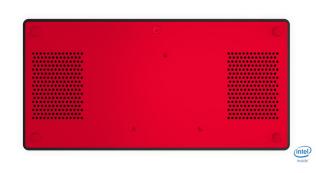


ThinkCentre M920z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	eries	Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2),
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			Dolby® Audio™ Premium
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	-	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	-	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265,, 2x2
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Bluetooth™	Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12.0 (Intel AMT 12.0);
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Managoasiity	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	O it I-i-	adapter to enable vPro function through wireless connection)
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable: Boot sequence control
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	-	Kensington lock also locks chassis) Boot sequence control Boot without keyboard and mouse
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	-	 Smart USB protection, allows keyboard/ Individual USB port disablement
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	_	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630 UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i5-9400	6/6	2.9G / 4.1G 3.0G / 4.4G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630	-	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i5-9500 Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Mechanical	Business black color
	Core i9-9900	8/16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	-	 Toolless back cover, stand, disk, memory removal Support VESA mount (100mm)
Mamari								
Memory	32GB max (16GB SC two 260-pin SO-DIM	M sockets	, dual-channel c	apable	,.	4-2000 ,		Dimensions (WxDxH) Max weight (lb / kg) Adjustments Without stand (No camera):
	* System clocks down for						_	21.3 X 1.8 X 13.7 (inch) (Touch) 14.0 / 6.34 N/A
Storage	Some: Hard Drive /							542 X 46 X 349 (mm) (Non-touch) 13.5 / 6.13 With Full Function Monitor stand (No camera):
	available via			RAIDU/ I	support (RAID pr	eset only		21.3 X 9.9 X 15.9 to 20.2 (inch) (Non-touch) 18.2 / 8.26 Tilt: 45° back, -5° forward; 542 X 252 X 405 to 514 (mm) (Non-touch) 18.2 / 8.26 Lift: 110mm; Swivel: +/-45°
	Some: Solid State D	rive (SSD)) / SATÁ 6.0Gb/s	s, 2.5"				542 X 252 X 405 to 514 (mm) (Non-touch) 18.2 / 8.26 Lift: 110mm; Swivel: +/-45°
	Some: M.2 SSD (22	42 / 2280) / PCIe NVMe, F	PCIe 3.0	x2 or PCle 3.0 x4	1		With UltraFlex III stand (No camera):
Optical	Some: Intel Optane ^T Some: DVD-ROM S				entium Processo	r), M.2		Tilt: 70° back, -5° forward;
Optical	Some: DVD-ROW S	(DVD±RV	V). SATA 1.5Gb/s	Drive. s	lim (9.0mm)			21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Lift: up to 136mm (flat mode) / up to 542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 81mm (vertical mode);
Media reader	Optional 3-in-1 media	a card rea	der	, 2, 0				Swivel: +/-45°
Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,	Power supply	150 watts, autosensing, 90% PSU
	external monitor supp	oort via D	isplayPort™;		-			
Display	Max resolution: 4096 23.8" (604.5mm) Ful	II HD 108	Op (1920x1080)	TFT cold	or, Borderless des	sign,	Limited warranty ³	 Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
	In-Plane Switching to	echnology	(In-Plane Switch	ning may	refer to IPS, PLS	S, ADS,	Preload	Preloaded operating system
	AHVA, and AA), wide ratio, 1000:1 contrast	viewing a	angle (+/- 89°), L i-glare, support l	.ED back	dight, 250 nits, 16	:9 aspect		Some: Windows 10 Pro 64-bit
	alone monitor via Dis	plavPort	DP in / out comb	20W Dide	Light Mode, wor	n as stariu-		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Multi-touch	Optional multi-touch.	supports	10-point, AIT (A	dvanced	In-cell Touch) ted	hnology		Lenovo Vantage
Camera	Some: 1080p came	ra, with du	al microphone, l	ED indic	cator, physical sw	itch on/off,		Microsoft Office preloaded;purchase a product key to activate
		_	,		180°, vertical -25	,		 Cyberlink PowerDVD (only for models with DVD / DVD±RW)
	Some: RGBIR came supports mul	ti-degree	rotation (horizon	tal 0° to	180°, vertical -25	° to 25°)		Cyberlink Power2GO (only for models with DVD±RW) Linked In
	Windows He	llo suppor	t, only available [,]	via speci	al bid models	,	For the contract	• LinkedIn
Controls	Physical buttons on s	side for mi	crophone mute a	and powe	er on/off		Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3, TCO AIO Computer certified, GREENGUARD® certified,
Chipset	Intel Q370 Chipset							TUV Eye comfort certified, TUV Low Blue Light certified,
Rear ports*	Four USB 3.1 Gen1 (5),		TUV Ultra Low Noise certified (on some models), RoHS-compliant
Side ports*	one DisplayPort in/ou one USB 3.1 Gen2 (c					n1, one	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)
•	USB 3.1 Type-C Gen						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
	combo jack (3.5mm) * Depending on many fa	otoro oct	al data transfer ass	ad may b	a lawar than the aret	tical apped		
M.2 card slot	Two M.2 Card slots (one for W	LAN, one for SS	D/Optane	e lower man meorer 9)	livai speed		



















ThinkCentre M90n-1 Nano Platform Specifications

Processor	Intel® 8th Generation	Intel Core	e™ i3 / i5 / i7 Pro	cessor			Manageability	Intel vPro technology	on some models	(require choosing	a vPro-support Wi-Fi	
1 1000001	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 throug 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 and rear for optional Kensington® MicroSaver® cable) 				
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620					yboard and mouse	
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		Chassis intrusion sPower-on passwore		Individual USB Smart USB pro-	port disablement	
	Core i7-8665U	4/8	1.9G / 4.8G	8 MB	DDR4-2400	UHD 620		 Power-on password Administrator password Smart USB protection, allows keyboard mouse only, blocks all storage devices 				
Memory	8GB or 16GB / DDR4 * System automatical	1-2666* / :	soldered to syste	mboard	l, no sockets, nor	n-ECC	r Kevboard	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black				
Storage	Support up to two M.: Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane ^{TI}	2 SSD D / PCIe D / PCIe M 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 ** 128G M.2 2242 SSD RAID 0/1 support (RAID)	n SSD in`Po not suppor	Cle 3.0 x 2 M.2 slot ted on Machine Typ	t ćan only pe 11AM	/11AS/11AK/11/		Mechanical	Nano (0.35L), black of Three M.2 slots: two for WLAN		PCIe 3.0 x4 and or	ne PCIe 3.0 x2) and one	
		COO in ne		in man	om / DirectV® 10		-		Dimensio	ns (WxDxH)	Weight (Approx.)	
Graphics	Intel UHD Graphics DisplayPort™, one US displays;							M90n-1 Nano (with fan, 0.35L)		.46" X 0.87" 8mm X 22mm	1.11 lb (0.505 kg), vary by config	
Monitor cable	Max resolution: 4096: Optional DP to VGA of HDMI dongle, Type-C	dongle, D	P ['] to HDMİ dongl			, Type-C to	Mounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75m Some: DIN rail mount bracket kit			orts VESA 75mm	
Chipset	Intel SoC (System o	n Chip) p	latform				Floor Stand	None				
Front ports (Std.)	* 2x USB 3.1 Gen2, 1x	USB 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) 2x USB 3.1 Gen2, 1x power-in [20V and >4					port	Limited warranty	y Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available				
	* Depending on many fa					etical speed	Preload	Preloaded operating	g system			
Audio support	Realtek ALC233VB /							Some: Windows® 10 Some: Windows 10	0 Pro 64-bit Home 64-bit			
WLAN	Some: 11ac wireless Wi-Fi + Bluete Some: 11ac wireless	ooth 5.0 c	ombo adapter, 1	x1	,		Environment		, EPEAT™ Silver i	rating (North Americ models), RoHS, WE	ca), ErP Lot 3, TCO 8.0, EEE, REACH	
	Wi-Fi + Blueto Some: 11ac wireless Wi-Fi + Blueto	ooth 5.0 c s, M.2 Car ooth 5.0 c	combo adapter, 2 rd, Intel Wireless combo adapter, 1	x2 -AC 946 x1	62 (dual band),		MIL-SPEC test	MIL-STD-810H (Low Temperature Shock, Radiation)	v Pressure [Altitud Humidity, Sand a	de], High Temperatund Dust, Vibration, S	re, Low Temperature, Shock, Fungus, Solar	
	Some: 11ac wireless Wi-Fi + Blueto	ooth 5.0 c s, M.2 Ca ooth 5.0 c	combo adapter, 2 d, Intel Wireless combo adapter, li	x2 -AC 956 ntel vPro	60 (dual band), o technology sup	port, 2x2	Accessories	For compatible acces	ssories, please go	to http://smartfind	d.lenovo.com	
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Inte	I Etherne	Connection I21	-Fi + BT 9-LM(Ja	combo adapter cksonville), Wake	e on LAN®					Lenovo, March 2020	



















ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th	Generati	on Intel Core™ i	3 / i5 Pro	ocessor		Manageability	Intel vPro technology on s	ome models (require choosing	a vPro-support Wi-Fi	
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip Security features	adapter to enable vPro fur Discrete TPM 2.0, TCG Ce	nction through wireless connec	tion)	
	Celeron 4205U	2/2	1.8G	2 MB	DDR4-2133	UHD 610		• Security slot (in rear for	optional • Boot sequence	e control	
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		 Kensington® MicroSaver Chassis intrusion switch 	eyboard and mouse I port disablement		
	Core i3-8145UE	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		Power-on password	i ilidividuai 03L	port disablement	
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		 Administrator password 			
Memory	4GB / DDR4-2666* / * System automatically of					er	Keyboard	Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black			
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane ^T PCIe NVMe S	D / PCle I D / PCle I ™ Memory 3 0 x 4 (no	NVMe, PCIe 3.0 H10 with Solid	x 2** State St	_		Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello sup Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), bla			
RAID Optical	* M.2 SSD / Optane with ** 128G M.2 2242 SSD RAID 0/1 support (R/ None	h SSD in Po not suppoi	Cle 3.0 x 2 M.2 slo ted on Machine Ty	t can only pe 11AM	1/11AS/11AK/11.	AL	Mechanical	Four M.2 slots: two for M.2	Nano (fanless 0.55L), black color; metal case Four M.2 slots: two for M.2 SSD (one PCle 3.0 x4 and one PCle 3.0 WLAN, and one for WWAN		
		610/620 :	nroccoor Ho	o main	mamarı, DiraatV®	10 000	-		Dimensions (WxDxH)	Weight (Approx.)	
Graphics	Intel UHD Graphics DisplayPort™, one US displays;							M90n-1 Nano IoT (fanless, 0.55L) 1	7.05" X 3.46" X 1.36" 179mm X 88mm X 34.5mm	1.58 lb (0.72 kg), vary by config	
Monitor cable	Max resolution: 4096. Optional DP to VGA of HDMI dongle, Type-C	dongle,`DI	o to HDMİ dongl	(2304 (T e, Type-	ype-C)@60Hz; C to VGA dongle,	, Type-C to			7.05" X 3.46" X 2.41" 179mm X 88mm X 61.3mm	2.65 lb (1.2 kg), vary by config	
Chipset	Intel SoC (System o						Mounting		ket kit, supports VESA 75mm	outo VECA ZEmm	
	*2x USB 3.1 Gen2, 1x jack (3.5mm), 2x seri	USB 3.1		one head	dphone / microph	one combo	Floor Stand	Some: VESA mount bracket kit with adaper holder, supports VESA 75mm Some: DIN rail mount bracket kit None			
	With Celeron: 1x US power With Core i3: 1x US suppo	B 2.0, 1x r-in [20V, : B 3.1 Ger rt power-ii	> 45W]), 1x etne 2, 1x USB 3.1 T 1 [20V, > 45W]),	ype-C G 2x ethe	i-45), 1x DisplayF ien 2 (with display rnet (RJ-45), 1x [ort y function, DisplayPort	Power supply	Some: 65 watts AC/DC adapter*, autosensing, 88% PSU Some: 65 watts AC/DC adapter (wide temperature)*, autosensing, 88% PS for Machine Type 11AS) * Not for the models with I/O box			
I/O box*	Optional I/O box, con extends 2x serial, 2x gigabit ethernet), 1x	ethernet (RJ-45, I/O box i	s equipp	ed with Realtek F	RTL8153B,	Limited warranty	y Some: 1-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service / service upgrades available			
	* Depending on many fa	actors, actu	al datá transfer sp	eed may	bè lower than theor	etical speed	Preload	Preloaded operating sys			
Audio support	Realtek ALC233VB /	internal s	oeaker (1watt)					Some: Windows® 10 Pro Some: Windows 10 Hom			
WLAN	Some: 11ac wireless				(dual band),				ie 64-bit Enterprise (only available via si	pecial bid model)	
	Some: 11ac wireless	s, M.2 Car cooth 5.0 c	ombo adapter, 2	8822CE 2x2	,		Environment	ENERGY STAR® 7.1*. EP	EAT™ Silver rating (North Ameloise verified (on some models)	rica)*. ErP Lot 3.	
	Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet	ooth 5.0 c s, M.2 Car ooth 5.0 c	ombo adapter, 1 d, Intel Wireless ombo adapter, 2	1x1 -AC 956 2x2	60 (dual band),		MIL-SPEC test	MIL-STD-810H* (Low Pres	ssure [Altitude], High Temperatidity, Sand and Dust, Vibration,	ure, Low Temperature, Shock, Fungus, Solar	
Bluetooth Ethernet	Wi-Fi + Bluet Some: Bluetooth 5.0 With Celeron: Gigab With Core i3: Two g	ome: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2 ome: Bluetooth 5.0 wireless, integrated in Wi-Fi + BT combo adapter fith Celeron: Gigabit ethernet, Realtek RTL8111K, 1x RJ-45, Wake on LAN® fith Core i3: Two gigabit ethernet, Realtek RTL8111K and RTL8111H, 2x RJ-44 Wake on LAN							es, please go to http://smartfir	nd.lenovo.com	
	With Core i5: Two gi	gabit ethe ealtek RT	_8111H, 2x RJ-4	net Coni 15, Wake	nection I219-LM(c e on LAN	Jacksonville)				Lenovo March 202	













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron® Int	tel Pentiu	m® or 6/7th Gen	eration l	ntel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in rear for optional Power-on password
1 10003301		Cores /	Frequency		Memory Support		Coounty leatures	Kensington® MicroSaver® cable) • Administrator password
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Padlock loop
	Celeron G3900	2/2	2.8G	2 MB	DDR4-2133	HD 510		Smart USB protection, allows keyboard/ Boot sequence control Boot sequence control Boot sequence control Boot without look and make
	Celeron G3930	2/2	2.9G	3 MB	DDR4-2133	HD 610		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		lock both keyboard and mouse Optional chassis intrusion switch
	Pentium G4500	2/2	3.5G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	1	Some: Lenovo Traditional Keyboard (USB connector), black
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, b
	Core i5-6400	4/4	2.7G / 3.3G	6 MB	DDR4-2133	HD 530	Mechanical	• SFF (7.4L), black color, metal case
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		• (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 273.5mm
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 Approx. 9.37 lb (4.25 kg), weight may vary by configuration Bay 1: Slim external ODD bay
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630		Bay 2: 3.5", 1" high, internal, supports 2.5" or 3.5" HDD/SSD (2.5 to 3.5 bracke
	Core i3-7300	2/4	4.0G	4 MB	DDR4-2400	HD 630		comes with disk)
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCle 3.0 x16*
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		Slot 2: low-profile (length < 152mm, height < 64mm), PCIe 3.0 x1* M.2 card slots: one for SSD
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		*Optional rear 2x USB2.0 / parallel occupies one expansion slot
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Floor Stand	Optional system floor stand for vertical orientation
Memory	32GB max, UDIMN dual-channel capa	bĺe	, ,		,	,	Packaging	(WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500mm Cross weight (approx.) 14.22 lb (6.45 kg)
	*System automation						Power supply	Some: 180 watts, autosensing, 85% PSU
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Drive (S	SD) / SATA 6.0G	b/s. 2.5"				Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Optical	Some: DVD-ROM	I SATA 1.	5Gb/s Drive, slim	ı (9.0mm)	3	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit
Onboard SATA	Some: DVD Burn Two onboard SATA			D/S DIIVE	e, Siim (9.0mm)			Some: Windows 10 Pro 64-bit
Media reader	Optional 7-in-1 me							Some: Windows 7 Professional 32/64 preinstalled through downgrade rights
Graphics	Intel HD Graphics	510/530	/610/630 in proc	essor. us	es main memory.	DirectX® 12.		in Windows 10 Pro 64-bit(not available with 7th Gen Intel processor)
	one VGA, one Disp	olayPort™	, supports 2 inde					Preloaded applications (only some listed)
	discrete graphics t	o support	more displays;	004000	(\(\(\alpha \) \(\alpha \) \(\alpha \) \(\alpha \) \(\alpha \)			Microsoft Office preloaded; purchase a product key to activate
	Max resolution: 40 Some: NVIDIA Ge	96X2160 force® G	(DP)@60HZ; 192 T 730 DirectY 1	20X1200	(VGA)@60HZ PCIa 2 0 v8 adant	or		Cyberlink PowerDVD (DVD, DVD±RW)
	two Display	Port. 35	watts:	z, zGD, i	Cie 2.0 xo auapi	ei,		Cyberlink PowerDVD Create (DVD±RW)
			0x2160 (DisplayF	Port)@60	Hz;			- Only for Window 10
Monitor cable	Optional DP to VG	A, DP to	DVI-D (single link	c), DP to	dual DP, or DP to	HDMI 1.4		 Lenovo Companion Only for Window 7
Chipset	Intel B250 Chipse	et						Lenovo Solution Center
Front ports*	Two USB 3.1 Gen	1, micropl	none (3.5mm), oi	ne headr	hone / microphor	e combo jacl	₹	Lenovo System Update
	(3.5mm)		_ , ,,					Create Recovery Media
Rear ports*	Two USB 3.1 Gen	1, two US	B 2.0, optional to	vo USB 2	2.0, serial (9-pin),	optional 2nd		Adobe® Reader®
	serial (9-pin), optional external U	ınaı paralı ISB to PS	lei (∠5-piñ), ethei 3/2 ports cable (fo	net (HJ-	45), ONE VGA, ONE	e DisplayPort	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3,
	additional Display	Port on or	ntional graphics of	n some	models	,		RoHS-compliant, WEEE
Rear audio ports	Line-out jack (3.5n		monar grapinos s				Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
IEEE 1394*	None	,						
	* Depending on many	y factors, a	ctual data transfer	speed ma	y be lower than theo	retical speed		
Audio support	High Definition (HI	D) Audio,	Realtek ALC233	/ interna	l speaker (1.5 wa	tt)]	
WLAN ¹³	None							
Bluetooth™	None		TI 044411N1 N4/1		10			
Ethernet Modem	Gigabit ethernet, F None	кеапек Н	IL8111HN, Wake	e on LAN	₩			
							-	
Manageability Security chip	None TPM (Trusted Platt	form Mod	ule) 2.0, TCG Ce	ertified				
	* Downgrade to TF				G Win7 32 OS			
Note: The execition	ations above may not	امانور بو مط	ala in all maniana	_				Lenovo January













ThinkCentre M720 SFF Platform Specifications

Processor	Intel® Celeron®, Intel F	Pantium®	or 8th / 9th Gon	Intel Co	ore™ i3 / i5 / i7 / i0	Processor		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),			
FIOCESSOI		Cores /	Frequency		Memory Support			Wi-Fi + Bluetooth 4.2 combo adapter, 2x2			
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2			
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter			
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®			
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4 Some: Bitland BN8E88*, gigabit ethernet, PCIe x1 (only available via special bid)			
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		* Choose either I350-T4 or BN8E88			
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	None			
	Core i5-8400	6/6	2.8G / 4.0G 3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified			
	Core i5-8500	6/6		9 MB	DDR4-2666	UHD 630 UHD 630	Security features	Security slot (in rear for optional Power-on password			
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666 DDR4-2666	UHD 630		Kensington® MicroSaver® cable) • Administrator password			
	Core i7-8700 Core i3-9100	6 / 12 4 / 4	3.2G / 4.6G 3.6G / 4.2G	12 MB 6 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control 			
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400 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	DDR4-2400 DDR4-2666	UHD 630		 Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/ 			
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	IZ - da d	mouse only, blocks all storage devices			
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black			
	Core i7-9700 8 / 8 3.0G / 4.7G 12 MB DDR4-2666 UHD 63							Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Marria	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
Memory	64GB max, UDIMM, D	DB4-266	66 four 288-nin	DIMM sc	ockets non-ECC		Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
Wemery	dual-channel capable * System automaticall	*	•			v controller		Some: Lenovo Fingerphili Mouse (0.5B colinector), Windows Hein 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)			
Storage	Some: Hard Drive / S					y controller					
Storage	Some: Solid State Dr Some: M.2 Solid State * M.2 SSD (2242) PC	ive (SSD te Drive (le NVMe) / SATA 6.0Gb/s SSD) / PCIe NVI only supports P	s, 2.5" Me, PCI Cle 3.0 x	e 3.0 x 4*, 32Gb/s x 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: Intel Optane™ Some: DVD-ROM SA	ata 1.5GI	b/s Drive, slim (9	.0mm)		r), M.2		Optional dust filter Bay 1: Slim external ODD bay			
Onboard SATA	Some: DVD Burner (Three onboard SATA			Drive, s	ilm (9.0mm)			Bay 2: 3.5", 1" high, internal, HDD/SSD			
Media reader	Optional 7-in-1 media		Connectors					Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 147mm, height < 68.9mm), PCIe 3.0 x16			
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main r	nemory. DirectX®	12.	1	Slot 2: low-profile (length < 147mm, height < 68.9mm), PCIe 3.0 x1			
	one VGA (up to 2048)	<1536@5	0Hz), two Displa	yPort™ ((up to 4096x2304	@60Hz),		Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1			
	supports 3 independe							Slot 4: no slot, only bracket for optional port extension			
	Some: NVIDIA Gefor	Ce® GI/ 35 watte	two DisplayPort	Un to 3	. 12, 2GB GDDR5 840x2160@60Hz), '\	Floor Stand	M.2 card slots: Two (one for WLAN, one for SSD/Optane) Optional system floor stand for vertical orientation			
	Some: AMD Radeon										
Manitan aalala	two DisplayPo	rt (up to 4	1096x2160@60F	lz)	•	•	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU			
Monitor cable	Optional DP to VGA d Display with intel inted					for Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	Intel B360 Chipset	grateu gra	apriics), or DF to	ו ווטוטוו ו	.4 dorigie		Limited warranty	³ 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	.1 Type-	C Gen1 (15W cha	arging).	Broload	Some: 1-year or 3-year, limited onsite service / service upgrades available			
. , ,	1x microphone (3.5mr	m), 1x he					Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit			
Front ports* (Opt.) Rear ports* (Std.)	Optional: 1x media rea 4x USB 2.0, 1x serial	ader (9-pin), 1	x ethernet (RJ-4	5), 1x V(GA, 2x DisplayPo	rt,		Some: Windows 10 Pro 4-0it Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
	1x line-out (3.5mm)							Lenovo Vantage			
near ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCI2 x1**, 2x U	SB 3.1 T	ype-C Gen2 via F	Cle x4**		Microsoft Office preloaded;			
	(special bid only), 1x 2 pin), 2x PS/2 ports (ke	evboard/r	າ (ອະນານ), 4x ຣອກຣ nouse), addition:	u (ə-piii) al RJ-45	and video norts a	aran e r (∠3- availahle on		purchase a product key to activate			
	optional graphics or e	thernet ca	ard		·			 Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 			
	* Depending on many fac					tical speed		LinkedIn			
	** Choose either 2x USB						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,			
Audio support	High Definition (HD) A					tt)		TUV low noise verified (coming soon, on some models), RoHS-compliant			
WLAN	Some: 11ac wireless, Wi-Fi + Blueto		d, Realtek RTL8 combo adapter, 1		dual band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			













ThinkCentre M720e SFF Platform Specifications

Dragonor	Intal® Calaran® Intal	Dantium®	or Oth / Oth Con	Intal Ca	*oTM :0 /:E /:7 /:0	Drassass	Managashilitu	None	
Processor	Intel® Celeron®, Intel			inter Co	Υ		Security chip	None Discrete TPM 2.0, TCG Certified	
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Graphics		s • Security slot (in rear for optional • Power-on password	
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	occurry leatures	Kensington® MicroSaver® cable) • Administrator password	
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Padlock loop	
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Smart USB protection, allows keyboard/ Boot sequence control Boot sequence control Boot sequence control	
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement 	
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		lock both keyboard and mouse • Optional chassis intrusion switch	
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black	
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Some: Lenovo Traditional Keyboard (USB connector), black	
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black	
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Mechanical	SFF (7.4L), black color, metal case	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630		• (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 274.8mm	
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		 Approx. 9.37 lb (4.25 kg), weight may vary by configuration Bay 1: Slim ODD bay 	
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Bay 2: 3.5" disk bay, supports 2.5" HDD (2.5 to 3.5 bracket comes with 2.5" disk)	
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCIe 3.0 x16*	
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Slot 2: low-profile (length < 152mm, height < 64mm), PCle 3.0 x1*	
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		M.2 card slot: one for SSD *Optional rear 2x USB2.0 / parallel occupies one expansion slot	
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Floor Stand	Optional system floor stand for vertical orientation	
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Packaging	• (WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500mm	
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	ackaging	• Cross weight (approx.) 14.48 lb (6.57 kg)	
Memory	32GB max, UDIMM, I	DDR4-26	66*. two 288-pin	DIMM so	ockets, non-ECC.		Power supply	180 watts, autosensing, 85% PSU	
,	dual-channel capable		, p				11.7	<u> </u>	
	* Memory may be und processor	derclocke	d to DDR4-2400	for the Id	ower memory con	itroller in	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available	
Storage	Some: Hard Drive / S	SATA 6 00	3b/s 2.5" or 3.5"	5400 rp	m or 7200 rpm		Preload	Preloaded operating system	
Otorago	Some: M.2 Solid Sta	te Drive (SSD) / PCIe NVI	Ие. PCle	3.0 x2 or PCle 3	3.0 x4		Some: Windows® 10 Pro 64-bit	
Optane memory	Some: Intel Optane™	Memory	, M.2 2280, PCI	NVMe,	PCle 3.0 x 2			Some: Windows 10 Home 64-bit Some: Linux Ubuntu	
Optical	Some: DVD-ROM SA Some: DVD Burner (lim (0.0mm)		En income at		
Onboard SATA	Two onboard SATA 6.			Dilve, S	11111 (9.0111111)		Environment	ENERGY STAR® 7, EPEAT™ Silver rating (North America), ErP Lot 3, RoHS-compliant, WEEE	
Media reader	Optional 7-in-1 media						Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com	
Graphics	Intel HD Graphics 61	10/630 in	processor, uses	main me	mory, DirectX® 1:	2,	Accessories	To companione accessories, please go to http://www.ienovoquickpick.com	
•	one VGA, one Display			ndent dis	splays, works alo	ng with			
	discrete graphics to s Max resolution: 4096	upport m	ore displays;	1506 (\/	C				
	Some: AMD Radeon	™ 520 D	irectX 12 2GB 6	iDDR5 F	GA) @ SUFIZ PCIe 3 0 x8 adan	ter			
	one VGA, one	HDMI, 3	0 watts (Max);		·				
Manitan aalala	Max resolution	n: 3840x2	160 (HDMI)@30	Hz; 2048	3x1536 (VGA)@8	5Hz			
Monitor cable	Optional DP to VGA,	DP to DV	I-D (single link),	JP to du	al DP, or DP to H	DMI 1.4	_		
Chipset	Intel B365 Chipset								
Front ports* (Std.	Two USB 3.1 Gen1, n	nicrophor	ne (3.5mm), one	headpho	ne / microphone	combo jack	(
Front norto* (Ont	(3.5mm)								
Front ports* (Opt. Rear ports* (Std.)	Two USB 3.1 Gen1, to	wo USB 2	2.0. serial (9-pin)	etherne	t (RJ-45), one VC	A. one			
. , ,	DisplayPort, Line-out	jack (3.5)	mm)		, ,,	•			
Rear ports* (Opt.)	r ports* (Opt.) optional two USB 2.0, optional 2nd serial (9-pin), optional parallel (25-pin), optional external USB to PS/2 ports cable (for PS/2 keyboard / mouse); additional video ports or RJ-45 on optional graphics / ethernet card on some models								
	* Depending on many fac								
Audio support	High Definition (HD)					ioai speeu	-		
WLAN ¹³	3 / /	auio, ne	andr ALOUZU / II	nemai S	Joaner (2 Wall)		+		
WLAN [™] Bluetooth™	None None								
Ethernet	Gigabit ethernet, Rea								
Ethernet (Opt.)	Some: Bitland BN8E	88*, gigal	oit ethernet, PCI	x1					
Modem	None								













ThinkCentre M725 SFF Platform Specifications

Processor	ocessor AMD A6 / A8 / A10 / A12 and Ryzen 3 / 5 / 7 series processor						Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®		
		Cores /	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)		
	Processor	Threads	(Base/Max)	Cache	Support (Up to)	Graphics	Manageability Security chip	DASH 10/1.1 Discrete TPM 2.0, TCG Certified		
	PRO A6-9500	PRO A8-9600 4 / 4 3.1 / 3.4 2MB / - DDR4-2400 Radeon R7		Radeon R5	Security features	·				
	PRO A8-9600			Radeon R7		 Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password 				
	PRO A10-9700	4/4	3.5 / 3.8	2MB / -	DDR4-2400	Radeon R7		Padlock loop Hard disk password		
	PRO A12-9800	4/4	3.8 / 4.2	2MB / -	DDR4-2400	Radeon R7		 Smart USB protection, allows keyboard/ ■ Boot sequence control 		
	Ryzen 3 2300X	4/4	3.5 / 4.0	2MB / 8MB	DDR4-2933	None		mouse only, blocks all storage devices Boot without keyboard and mouse		
		Ryzen 5 2500X 4 / 8 3.6 / 4.0 2MB / 8MB DDR4-2933 None			 Optional cable lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch 					
	Ryzen 3 PRO 2200G	4/4	3.5 / 3.6	2MB / 4MB	DDR4-2933	Radeon Vega 8				
			2MB / 4MB	DDR4-2933	Radeon RX Vega 11	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black			
	Ryzen 5 PRO 2600 Ryzen 7 PRO 2700	6/12	3.4 / 3.9		DDR4-2933	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
	· ·	8 / 16	3.2 / 4.1		DDR4-2933	None		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
Memory	64GB max, UDIMM, DDR4-2666*, four 288-pin DIMM sockets, non-ECC, dual-channel capable * Systemboard supports up to DDR4-2666, memory frequency may automatically						Mouse	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		
	clocks down for the							Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Storage	Some: Hard Drive / Some: Solid State Some: M.2 SSD / F * 128GB SSD M.2 (Drive (SS PCIe NVN 2242) PC	SD) / SATA 6 Me, PCIe 3.0 Cle NVMe ar	5.0Gb/s, 2.5) x 4*, 32Gb	n/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. 13.2 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical removal 		
Optical	Some: DVD-ROM	supports PCIe 3.0 x 2, 16Gb/s Some: DVD-ROM SATA 1.5Gb/s Drive, slim (9.0mm) Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm)						Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD		
Onboard SATA	Three onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only available via special bid model)							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		
Media reader	Optional 7-in-1 med	lia reader	· ′					Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1		
Graphics	AMD Radeon™ Graphics in processor (only for some processors), uses main memory, DirectX® 12, one VGA (up to 1920x1200@60Hz), two DisplayPort™ (up to 4096x2160@60Hz, onboard VGA and DP ports are only available on the models with integrated graphics), supports 3 independent displays, works along with AMD						Floor Stand	Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1 Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0 M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation		
	discrete graphics to support more displays; Some: NVIDIA Geforce® GT 730, DirectX 12, 2GB GDDR5, PCIe 2.0 x16 (x8 elec adapter, 35 watts, two DisplayPort (up to 3840x2160@60Hz) Some: AMD Radeon™ 520, DirectX 12, 2GB GDDR5, PCIe 3.0 x8, 30 watts,)Hz)	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Mandanialia	two DisplayPort (up to 4096x2160@60Hz)						Limited warranty	1-year or 3-year, limited onsite service / service upgrades available		
Monitor cable	Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle, or DP to HDMI 1.4 dongle						Preload	Preloaded operating system Some: Windows 10 Pro 64-bit		
Chipset	AMD B450 Chipset	t						Some: Windows 10 Home 64-bit		
Front ports* (Std.)	2x USB 3.1 Gen2, 2	2x USB 3	.1 Gen1. 1x	microphone	e (3.5mm). 1	x headphone	1	Preloaded applications (only some listed)		
• • •	(3.5mm)		·	·	, , ,	•		Lenovo VantageMicrosoft Office preloaded;		
Rear ports* (Std.)	2x USB 3.1 Gen1, 2 2x DisplayPort**, 2x	Optional: 1x media reader, 2x USB 3.1 Type-C Gen2 via PCIe card (special bid only x USB 3.1 Gen1, 2x USB 2.0, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA**, x DisplayPort**, 2x PS/2 ports (keyboard / mouse); 1x line-in (3.5mm), 1x line-out 3.5mm), 1x microphone (3.5mm) Optional: 2x USB 2.0, 1x 2nd serial (9-pin), 1x parallel (25-pin), additional RJ-45 nd video ports available on optional graphics or ethernet card		-45), 1x VGA**,		 purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW) 				
Rear ports* (Opt.)	Optionál: 2x USB 2			additional RJ-45	Environment	LinkedIn ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);				
	Depending on many factors, actual data transfer speed may be lower than theoretical speed *only available on the models with integrated graphics					an theoretical speed	Accessories	ErP Lot 3; RoHS-compliant For compatible accessories, please go to http://smartfind.lenovo.com		
Audio support	High Definition (HD)) Audio, F	Realtek ALC	662 / option	al internal s	peaker (1 watt)	1			
WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1						-			
	Some: 11ac wireles Wi-Fi + Blue	ome: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 1x1								
	Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2				`	,,				
Discount TV	Wi-Fi + Blue	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: Bluetooth 4.2* wireless, integrated in Wi-Fi + BT combo adapter				, ,,				
Bluetooth™	* Hardware support									













ThinkCentre M75s-1 SFF Platform Specifications

Processor	AMD Athlon PRO and Ryzen 3 / 5 / 7 PRO series processor							Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®			
		Cores /	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	None			
	Processor	Threads			Support (Up to)	Graphics	Manageability Security chip Security features	DASH 10/1.1			
	Athlon PRO 300GE	2/4	3.4 / 3.4	1MB / 4MB	DDR4-2666	Radeon Vega 3		Discrete TPM 2.0, TCG Certified • Security slot (in rear for optional • Power-on password			
	Ryzen 3 PRO 3200G	4/4	3.6 / 4.0	2MB / 4MB	DDR4-2933	Radeon Vega 8	l coodiny loataroo	Kensington® MicroSaver® cable) • Administrator password			
	Ryzen 5 PRO 3400G	4/8	3.7 / 4.2		DDR4-2933	Radeon Vega 11		Padlock loop Hard disk password			
	Ryzen 5 PRO 3600	6 / 12			DDR4-3200	None		Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Boot sequence control Boot without keyboard and mouse			
	Ryzen 7 PRO 3700	8 / 16			DDR4-3200	None		 mouse only, blocks all storage devices Optional smart cable clip to physically Individual USB port disablement 			
	Ryzen 9 PRO 3900	12 / 24	3.1 / 4.3	6MB / 64MB	DDR4-3200	None		lock both keyboard and mouse • Optional chassis intrusion switch			
Memory	64GB max, UDIMM dual-channel capab * Memory may be ullower capability of m	le nderclocl	ked to DDR4	-1866, DD	•	,	Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black			
Storage	Some: Hard Drive / Some: M.2 SSD (2)	242 / 228	30) / PCIe N'	VMe, PCIe :	3.0 x2 or PC	00 rpm le 3.0 x4		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, It Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
Optical	Some: DVD-ROM Some: DVD Burner					nm)		SFF (8.4L), black color; metal case			
	Three onboard SATA	4 6.0Gb/	s connectors	s, RAID 0/1	support (RA	ID ['] preset only	Mechanical	(WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.2 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical, and extension card removal Optional dust filter			
	available via special Optional 7-in-1 med										
	AMD Radeon™ Gra			(only for so	ma nrocassi	ore) usas main					
	memory, DirectX® 1: are only available or displays, works alor Max resolution: 409 Some: AMD Radeo two DisplayF Max resoluti Optional DP to VGA	n the moding with Al 6x2160 (on™ 520 , Port, 30 w on: 4096	dels with inte MD discrete DP)@60Hz; DirectX 12, vatts (Max); x2160 (DP)@	egrated grap graphics to 2GB GDDF	ohics), suppo support mod 5, PCIe 3.0	orts 3 independent re displays; x8 adapter,	Floor Chand	Bay 1: Slim external ODD bay Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1 Slot 4: low-profile (length < 150mm, height < 68mm), PCl 3.0 M.2 card slots: two (one for WLAN, one for SSD)			
Chipset	AMD PRO 560 FCH	ł					Floor Stand	Optional system floor stand for vertical orientation			
, ,	ront ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x microphone (3.5mm), 1x headphone (3.5mm) ront ports* (Opt.) <i>Optional:</i> 1x media reader						Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)			
Rear norts* (Std.)	2x LISB 3.1 Gen1 (c	ne sunn	ort Smart Po	wer-On), 2	CUSB 2.0, 1	x serial (9-pin), 1x	Limited warranty 1-year or 3-year, limited onsite service / service upgrades available				
Rear ports* (Opt.)	ethernet (RJ-45), 1x line-in (3.5mm), 1x l Optional: 2x USB 2 optional graphics ca * Depending on many i ** only available on the	ine-out (i .0, 1x pa ird	rallel (25-pin	nicropnone i), additiona	(3.5mm) I video ports	available on	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise Some: Linux Ubuntu			
Audio support	High Definition (HD)						Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);			
WLAN	Some: 11ac wireles	s, M.2 C	ard, Realtek	RTL8822C	E (dual band	d),	A a a a a a a a a a	ErP Lot 3; RoHS-compliant, WEEE			
	Wi-Fi + Bluetooth 5.0 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9260 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, 2x2						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Bluetooth™	Wi-Fi + Blue Some: Bluetooth 4.				-Fi + BT com	nbo adapter					
	tions above may not b						I	Lenovo, September 201			



















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 (Up to)		WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),		
	Celeron G4900	2/2	3.1G	2 MB	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 Ethernet	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, PCle x1 (special bid only)		
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);		
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		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 ohin	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 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 I belief the second 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	1	Some: Lenovo Traditional Keyboard (USB connector), black		
		Core i9-9900 8 / 16 3.1G / 5.0G 16 MB DDR4-2666 UHD 630						Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
Memory	64GB max, DDR4-26 * System automatical						Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bi Some: Lenovo Calliope Mouse (USB connector), black		
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 Solid State	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 suppor Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bit		
Optical	* 128GB SSD M.2 (2: Some: Intel Optane ^T Some: DVD-ROM, S	242) PCle Memory SATA 1.5€	e NVMe only sup / (not support Co 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	Some: DVD Burner 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	Some: AMD Radeon	x1536@5 ent displa r ce® GT 7 35 watts, n™ 520 , D	50Hz), two Display ys, more display: 7 30 (End Of Life) , two DisplayPort	ayPort™ (s suppor , DirectX : (up to 3 GDDR5,	(up to 4096x2304 t via discrete grap 12, 2GB GDDR5 840x2160@60Hz	@60Hz), phics 5, 2)	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 on Display with intel intel	dongle, D	P to DVI-D dong	le, DP to		for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Chipset	Intel Q370 Chipset						Limited warrants			
Front ports* (Std.)	2x USB 3.1 Gen2, 2x 1x microphone (3.5m						Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available			
Front ports* (Opt. Rear ports* (Std.)) <i>Optional:</i> 1x media re 4x USB 3.1 Gen1, 1x	eader serial (9-	pin), 1x etherne	t (RJ-45)	, 1x VGA, 2x Disp	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	1x line-out (3.5mm)) <i>Optional:</i> 2x USB 2.0	. 2x USB	3.1 Gen1 via PC	le x1, 2x	USB 3.1 Type-C	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant			
	via PCIe x4 (special I 1x parallel (25-pin), 2 USB3.1 Type-C Gen additional RJ-45 and * Depending on many fa	oid only), xx PS/2 po 2 / Displa video por	1x 2nd serial (9- orts (keyboard/m yPort) via PCIe o ts available on c	pin), 4x s ouse), 1: <4 (availa ptional g	serial (9-pin) via F x Thunderbolt 3 (o able on 09/30/201 graphics or ethern	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			

























ThinkCentre M625 Tiny Platform Specifications

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























ThinkCentre M625 Tiny Thin Client Platform Specifications

Processor	AMD E2 series A	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo
	APU	Cores	Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo
	AFO	Coles	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), fan-less design, black color, metal case • Toolless chassis open (for models with optional toolless chassis screw)
	E2-9000e	2	1.5 / 2.0 GHz	1 MB	DDR4-1866	Radeon R2 Series		Toolless SSD, memory, Wi-Fi removal M625 Tiny Thin Client only:
Memory	controller in proc	ncy autor essor	matically clocks	down fo	r the lower ca	pability of memory		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	.2 Solid ₹ И.2 Solid	State Drive (SS State Drive (S	D) / SAT/ SD) / PC	A interface Ie NVMe inter	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	None one SATA 6.0Gb	/s conne	ctor on planar				Power supply Limited warranty	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models) Some: 1-year, depot service / service upgrades available
Media reader Graphics	None AMD Radeon™	Granhic	e in processor	licae ma	in memory Di	irectX® 12 two	Limited warranty	Some: 1-year, limited onsite service / service upgrades available
·	DisplayPort™, or 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 Ty	USB 2.0 splays; ; 2048x1, pe-C) @ 6) Type-C with I 280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Monitor cable	Optional DP to V		to DVI-D (single	e link), or	DP to HDMI	1.4 dongle	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO
Chipset Front ports*	AMD SoC platfo		ic Always On a	nd fact o	hargo) one m	icrophone (3.5mm),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,
•	one headphone	/ microph	none combo jac	k (3.5mr	n)		5: 25 1551	Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock,
Rear ports*	One USB 3.1 Getwo optional port Alternate Mode),	ts (Port 1 , Port 2 f	for VGA / seria or serial)	al / USB 2	2.0 Type-C (wi	th DisplayPort	Accessories	Fungus, Solar Radiation) For compatible accessories, please go to http://smartfind.lenovo.com
I/O box	* Depending on ma None	any factors	s, actual data tran	sfer speed	d may be lower t	than theoretical speed		
Audio support	High Definition (I	HD) Audi	o, Realtek ALC	233-VB2	2-CG / internal	speaker (1.5 watt)]	
WLAN ¹³	Some: 11ac win Wi-Fi + E Some: 11ac win Wi-Fi + E Some: 11ac win Wi-Fi + E Some: 11ac win	Bluetooth eless, M Bluetooth eless, M Bluetooth eless, M Bluetooth eless, M	4.2* combo ac 2 Card, Qualco 4.2* combo ac 2 Card, Realte 4.2* combo ac 2 Card, Qualco 4.2* combo ac	dapter, 12 omm Athorization Athorization Athorization k RTL88. dapter, 22 omm Athorization Athorization fireless-A	k1 eros QCA937; k1 22BE (dual ba k2 eros QCA6174 k2 AC 9260 (dual	7 (dual band), and), 4A (dual band),		
Bluetooth™	Some: Bluetootl * Win 10 RS3 an	h 4.2/5.0 id Win10	* wireless, integer earlier version	grated in only sup	Wi-Fi + BT co port Bluetooth	mbo adapter n 4.1		
Ethernet Modem	Gigabit ethernet, None	, Realtek	RTL8111HN, \	Wake on	LAN®			
Manageability Security chip Security features	None Discrete TPM 2.0 • Security slot (in Kensington® M • Smart USB pro mouse only, blo • Power-on pass	n rear for licroSave otection, ocks all	r optional er® cable) allows keyboar	• Hai d/ • Boo • Boo • Ind		ord ontrol ooard and mouse ort disablement		

















ThinkCentre M630e Tiny Platform Specifications

Processor	Intel® Pentium®, or 8th	Generat	ion Intel Core™	i3 / i5 Pr	ocessor		Manageability	None						
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support	Integrated	Security chip	Firmware TPM 2.0,	integrated in chipse					
	Pentium Gold 5405U	2 / 4	2.3G	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security leatures	 Security slot (in re Kensington® Micro 	ear for optional oSaver® cable)	Boot sequence Boot without key	control board and mouse			
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		Chassis intrusion	switch	 Individual USB 	port disablement			
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		 Power-on password Smart USB protection, allows keyboa 						
Memory	16GB max, DDR4-266						_	Administrator pasHard disk passwo		mouse only, blo	cks all storage devices			
Wichiory	* System automaticall	y clocks	down for the prod	cessors	with lower memo	ry controller	Keyboard							
Storage	Some: Hard Drive / S	ATA 6.00	ab/s, 2.5", 5400 r	rpm or 7			Mouse	Some: Lenovo Calliope Mouse (USB connector), black						
	Some: Solid State Dr Some: M.2 SSD (228				PGh/s		Mechanical	Tiny (1L), black color; metal case						
	Some: M.2 SSD (224							 Optional dust filter One 2.5" bay for HDD/SSD, two M.2 slots (one for WLAN, one for M.2 S 						
Onboard SATA	One onboard SATA 6.							Office 2.5 bay for i	·	·				
Graphics	Intel HD Graphics 61					12, one			+	ns (WxDxH)	Weight (Approx.)			
	DisplayPort™, one HD							Tiny only		20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config			
Monitor cable	Max resolution: 4096x Optional DP to VGA d	onale or	DP to HDMI 1.4	.2304 (n donale	DIVII) @ 24 HZ			0 11 11/504			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Chipset	Intel SoC (System or	n Chip) p	latform				VESA mount Floor Stand	Optional VESA mou Optional system flo			and 100mm			
Front ports* (Std.)	One USB 3.1 Gen1, o				nicrophone (3.5m	ım),	Power supply	Some: 65 watts adapter, autosensing, 88% PSU						
Rear ports* (Std.) Rear ports* (Opt.)	one headphone / micr Two USB 3.1 Gen1, to None	vo USB 2	ombo jack (3.5n .0, one ethernet	nm) (RJ-45)	, one DisplayPor	t, one HDMI	Limited warranty	/ Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available						
	* Depending on many fac	ctors, actua	ıl data transfer spe	ed may b	e lower than theore	etical speed	Preload	Preloaded operati						
Audio support	Realtek ALC233VB / i	nternal s	peaker (1.5 watt))				Some: Windows® Some: Windows 1	10 Pro 64-bit					
WLAN	Some: 11ac wireless,				dual band),			Preloaded applica		isted)				
	Wi-Fi + Blueto Some: 11ac wireless		ombo adapter, 1		(dual band)			 Lenovo Vantage 	` •	,				
			ombo adapter, 2		duai bariu),			Microsoft Office p						
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirele	ess-AC 3165,			purchase a produLinkedIn	ict key to activate					
	Some: 11ac wireless		ombo adapter, 1 d. Intel Dual Bar		ess-AC 8265		Environment	ENERGY STAR® 7.	0. EPEAT™ Silver r	ating, ErP Lot 3, TO	CO. RoHS-compliant.			
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2	,			ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, RoHS-compliant, WEEE, REACH						
Bluetooth	Some: Bluetooth 4.2			-Fi + BT	combo adapter		MIL-SPEC test	st Coming soon						
Ethernet Ethernet (Opt.)	Gigabit ethernet, Real None	itek HTL	TITHN-CG				Accessories	For compatible accessories, please go to http://smartfind.lenovo.com						
							1							

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













ThinkCentre M710 Tiny Platform Specifications

Processor	Intel® Celeron®. Int	el Pentiur	n®. or 6/7th Gene	eration In	itel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in real	ar for optional • Administrate	or password				
	Processor	Cores /	Frequency Base/Max(GHz)		Memory Support (Up to)		Joseph Harris	Kensington® Micro		assword				
	Pentium G4400T	2/2	2.9G	3 MB	DDR4-2133	HD 510		mouse only, blocks	all storage devices Boot without	t keyboard and mouse				
	Pentium G4560T	2/4	2.9G	3 MB	DDR4-2400	HD 610		 Power-on passwor 	d ● Individual U ● Chassis intr	SB port disablement				
	Pentium G4600T	2/4	3.0G	3 MB	DDR4-2400	HD 630	Kaybaard	Comor Longua Calli						
	Core i3-6100T	2/4	3.2G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calli	ope Keyboard (USB connector), blac tional Keyboard (USB connector), bla	K ack				
	Core i5-6500T	4/4	2.5G / 3.1G	6 MB	DDR4-2133	HD 530		Some: Lenovo Calliope 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 on						
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630		 Toolless HDD, SSE Optional toolless c 						
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630		 Optional dust filter 	nassis screw					
Memory	32GB max, DDR4- dual-channel capa		o 260-pin SO-DI	MM sock	ets, non-ECC,			M740 Time and	Dimensions (WxDxH)	Weight (Approx.)				
Ctorogo	* System automatic	cally clock				ory controller		M710 Tiny only	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.91 lb (1.32 kg), vary by config				
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Drive (S	SD) / SATA 6.0Gb	o/s, 2.5"		le.		With VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config				
Optical	Some: Intel Optan Some: DVD-ROM	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		With VESA mount & I/O box	7.42" X 7.30" X 2.62" 188.4mm X 185.38mm X 66.6mm	3.66 lb (1.66 kg), vary by config				
•	Some: DVD Burne	er (DVϱF	RW), slim (9.0mm			box	VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm						
Onboard SATA Media reader	One onboard SATA None	4 6.0GD/S	connector				Floor Stand	Optional system floor stand for vertical orientation 65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)						
Graphics	Intel HD Graphics two DisplayPort™, with DisplayPort Al	one optio	nal video port (H	DMI, VG.	A, 3rd DP, or UŚĒ		Power supply	90 watts AC/DC ada	oter, autosensing, 88% PSU (only for	r models with I/O box)				
	Max resolution: 40	96x2304 (6x2304 ((Type-C)@60Hz;			Some: 1-year or 3-	year, depot service / service upgrad year, limited onsite service / servic					
Monitor cable	Optional DP to VG	A, DP to [HDMI 1.4	Preload	Some: Windows® 7 preinstalled	Professional 32/64 through downgrade					
Chipset	Intel B250 Chipse	et						rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel						
Front ports*	Two USB 3.1 Gen1	(one is A	Ilways On and fa	st charge	e), one microphor	ne (3.5mm),		(not available processor)	e with 7th Gen Intel					
Rear ports*	one headphone / n Four USB 3.1 Gen or two specific USB	1 (optiona	ıl external optical	box or e				Some: Windows 10 Some: Windows 10	Home 64-bit					
	two optional ports (with DisplayPort A	(Port 1 for Iternate N	VGA / 3rd DP / I lode), Port 2 for	HĎMI / s serial)	erial / USB 3.1 Ty	pe-C Gen 1		Preloaded applicati listed) • Microsoft Office pr	, ,					
I/O box*	Optional external la on rear, two USB 2 Tiny)							purchase a production of the p	t key to activate					
	* Depending on many	/ factors. ac	tual data transfer s	peed may	be lower than theo	retical speed		 Lenovo Companio 						
Audio support	High Definition (HD			· ·				- Only for Window 7	ontor					
WLAN ¹³	Some: 11ac wirele	,			•	,	1	Lenovo Solution CLenovo ThinkVanta						
VVLAIN		etooth 4.	1 combo adapter	, 1x1	`	,,		Create Recovery N Adobe® Reader®						
		etooth 4.	1 combo adapter	, 2x2	,	banuj,		Cyberlink PowerD\ (DVD±RW)	/D Create					
	Wi-Fi + Blu	etooth 4.	1 combo adapter	, 1x1			Environment	ENERGY STAR® 6.1	, EPEAT™ Gold rating (North Americ	ca),				
		etooth 4.	1 combo adapter	, 2x2				ErP Lot 3, GREENG TUV low noise verifie	UARD®, RoHS-compliant,	•				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None						MIL-SPEC test							
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	,						

See footnotes for more detailed information













ThinkCentre M715 Tiny (2nd Gen) Platform Specifications

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













ThinkCentre M715 Tiny Thin Client (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 Base/Max 3.2 GHz	L2 / L3 Cache 1 MB / 4MB	Memory Sup- port (Up to) DDR4-2666	Integrated Graphics Radeon Vega 3	Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5		, , , , , , , , , , , , , , , , , , , ,
	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	<u>' </u>	3.2 / 3.6 GHz		DDR4-2933	Radeon Vega 8		Optional dust filter
Memory	8GB max, DDR4 266 * System automatica							M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H
Disk Optical	Some: 32GB M.2 Some: 128GB M.2 Some	olid State Solid Sta	e Drive (SSD) te Drive (SSD	/ SATA inte 0) / 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	OMI dong Sx2160 ([les, and Athle	on / Athlon	PRO onlý su	pport 2 displays);	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Monitor cable	Optional DP to VGA	dongle,`l	DP to DVI-D	dongle, or D	P to HDMI 1	I.4 dongle	F	, , , , ,
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	hernet (RJ-	45), two Disp	playPort,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Rear ports* (Opt.)	One optional port (VC * Depending on many fa ** Not support VGA, 3rd	actors, act	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 wireless 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					70113 151 4.1		
Manageability Security chip Security features	Discrete TPM 2.0, TO			. A				
Coounty locatores	 Security slot (in reakensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on passworn 	Saver® c tion, allow all stora	able) ws keyboard/	Hard disBoot seBoot witIndividu	strator password password quence contained thout keyboa al USB port sintrusion sw	rol Ird and mouse disablement		













ThinkCentre M720 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®.	or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i	i9 Processor	Manageability	None					
		Cores /	Frequency		Memory Support		Security chip	Discrete TPM 2.0, TO	CG Certified				
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics	Security features	• Security slot (in rea	ar for optional	 Boot sequence 			
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610		Kensington® Micros	Saver® cable)		yboard and mouse		
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		Chassis intrusion sPower-on password		Individual USB Smart USB pro	tection, allows keyboard/		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		Administrator pass		mouse only, blo	cks all storage devices		
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		 Hard disk password 	d	, ,	<u> </u>		
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Keyboard	Some: Lenovo Callid	pe Keyboard (U	SB connector), black	K		
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), blac					
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callic Some: Lenovo Callic	ope Wireless Key	board (2.4GHz via l	JSB receiver), black		
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Iniouss	Some: Lenovo Gaino	erprint Mouse (USB	SB connector). Wind	dows Hello support, black		
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Callid	ope Wireless Mo	use (2.4GHz via US	B receiver), black		
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	Mechanical	Tiny (1L), black color	: metal case		·		
	Core i3-9300T	4/4	3.2G / 3.8G 1.8G / 3.4G	8 MB	DDR4-2400	UHD 630 UHD 630	1	 Toolless chassis op 	en (need option	al toolless chassis s	crew)		
	Core i5-9400T	6/6	<u> </u>	9 MB 9 MB	DDR4-2666			 Toolless HDD, SSD), mėmory rėmov	al			
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630		Optional dust filter S	VSSD one BCIe	2 0 v9 clot (low prof	ilo) two M 2 clots (one		
	Core i5-9600T	6/6 8/8	2.3G / 3.9G 2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		for WI AN, one for M.	//33D, title FCIE /2 SSD), 2.5" HD	D/SSD and PCIe ca	file), two M.2 slots (one and are mutually exclusive		
	Core i7-9700T Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630		Dimensions (WxDxH)					
						OHD 630	<u> </u>	- · ,			Weight (Approx.)		
Memory	32GB max, DDR4-266 dual-channel capable	•	·					Tiny only	179mm X 1	7.2" X 1.5" 83mm X 37mm	2.91 lb (1.32 kg), vary by config		
	* System automaticall	•				ory controlle	<u>r</u>	With VESA mount &		7.30" X 2.48"	3.66 lb (1.66 kg),		
Storage	Some: Hard Drive / S				200 rpm			ODD box	188.4mm X 18	35.38mm X 63mm	vary by config		
	Some: Solid State Dr Some: M.2 SSD / PC						VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			and 100mm		
	* 128GB SSD M.2 (22				Cle 3.0 x 2, 16Gb	o/s	Floor Stand	Optional system floor	r stand for vertica	al orientation			
Ontinal	Some: Intel Optane™	Memory	(not support Ce	leron / F	Pentium Processo	or), M.2	Power supply	Some: 65 watts AC/I	DC adapter, auto	sensing, 88% PSU			
Optical	Some: DVD-ROM, sli Some: DVD Burner (I					NOV.	'''	Some: 90 watts AC/I	DC adapter, auto	sensing, 88% PSU			
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector	via OOL	external ODD b	JOX		Some: 135 watts AC	/DC adapter, aut	osensing, 88% PSU			
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	10/630 in	processor, uses	main m	emory, DirectX®	12, one	Limited warranty	Some: 1-year or 3-y Some: 1-year or 3-y					
	or USB 3.1 Type-C Ge	en1 with [DisplavPort funct	tion), up	to 3 independen	it displavs:	Preload	Preloaded operating system					
	Max resolution: 4096x					p, c,		Some: Windows® 1	0 Pro 64-bit				
					48x1536 (VGA)			Some: Windows 10		linta al\			
Monitor cable	Optional DP to VGA d					(for Collage		Preloaded applicatiLenovo Vantage	ons (only some	listea)			
	Display with intel integ	grated gra	apriics), or DP to	ו וואוטח	.4 dongle		4	Microsoft Office pro	eloaded:				
Chipset	Intel B360 Chipset							purchase a produc	t key to activate				
Front ports* (Std.)	one USB 3.1 Gen1 (A							Cyberlink PowerD\ Cyberlink PowerD\	D (only for mode	els with DVD / DVD±	:RW)		
Rear ports* (Std.)	one microphone (3.5n 2x USB 3.1 Gen2, 2x							Cyberlink Power26LinkedIn	30 (only for mode	eis with DVD±RW)			
	Two optional ports (m						Environment	ENERGY STAR® 7.0	EDEATM Cold	rating (North Amoria	a) ErBlat 2 TCO		
	2nd HDMI / serial / US	SB 3.1 Ty	pe-C Gen 1 with	DP fund	ction); Port 2 for s	serial;	Liviloriment	TUV ultra low noise					
	Optional ports via PC PCIe x1	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	9-pin) via	MIL-SPEC test		, ,		de], High Temperature,		
	* Depending on many fac	ctors actua	al data transfer spe	ed may b	e lower than theore	etical speed		Low Temperature, Te	mperature Shock	k, Humidity, Sand an	d Dust, Vibration, Shock,		
Audio support	Realtek ALC233VB2		·			этэн эрэээ		Fungus, Solar Radia	tion)				
WLAN	Some: 11ac wireless,	, M.2 Car	d, Realtek RTL8	821CE (Accessories	For compatible acces	ssories, please g	o to http://smartfine	d.lenovo.com		
	Some: 11ac wireless	M 2 Car	ombo adapter, 1 d. Realtek RTI 8	X I 822RF 1	(dual hand)								
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	2x2	(ddai baria),								
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirele	ess-AC 3165,								
			combo adapter, 1		40 0005								
	Some: 11ac wireless		d, Intel Dual Bar ombo adapter, 2		ess-AC 8265,								
Bluetooth	Some: Bluetooth 4.2	wireless	integrated in Wi	مد -Fi + BT	combo adapter								
Ethernet	Gigabit ethernet, Intel	Ethernet	Connection I21	9-V (Jac	ksonville), Wake	on LAN®							
Ethernet (Opt.)	Some: Intel Ethernet	Server Ad	dapter I350-T4, g	gigabit e	thernet, 4x RJ-45	5, PCle x4							
	ations above may not be	9 11							-		Lanova Juna 2010		













ThinkCentre M75q-1 Tiny Platform Specifications

Processor	AMD Athlon PRO o	r Ryzen	3 / 5 PRO se	ries proces	sor		Security features	Security slot (in rear for optional Hard disk password					
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		 Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Boot sequence control Boot without keyboard and mouse Individual USB port disablement 					
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		Power-on password Chassis intrusion switch					
	Athlon PRO 300GE	2/4	3.4 GHz	1 MB / 4MB	DDR4-2666	Radeon Vega 3		Administrator password					
	Ryzen 3 PRO 2200GE	+	3.2 / 3.6 GHz		DDR4-2933	Radeon Vega 8	Keyboard	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black					
	Ryzen 5 PRO 2400GE	_	3.2 / 3.8 GHz		DDR4-2933	Radeon Vega 11	Mouse	Some: Lenovo Calliope Mouse (USB connector), black					
	Ryzen 3 PRO 3200GE		3.3 / 3.8 GHz		DDR4-2933	Radeon Vega 8		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black					
	Ryzen 5 PRO 3400GE	4/8	3.3 / 4.0 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 11		(only available via special bid models) Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black					
Memory	32GB max, DDR4-2 * System automatic						Mechanical	Tiny (1L), black color; metal case					
Disk	Some: Hard Drive	SATA 6	6.0Gb/s, 2.5",	5400 rpm o	or 7200 rpm			 Toolless chassis open (need optional toolless chassis screw) Toolless HDD, SSD, memory removal 					
Optical	Some: M.2 SSD (2 Some: DVD-ROM,	242 / 22 9 0mm	(80) / PCIE N bigh via USE	VMe, PCIe	3.0 x2 or PC	ie 3.0 x4		Optional dust filter					
Optical	Some: DVD±RW, 9	0.0mm h	igh, via USB	external OE	DD box			M75q Tiny only:					
Onboard SATA	One SATA 6.0Gb/s	connect	or on system	board				7.0" W X 7.2" Ď X 1.5" H 179mm W X 183mm D X 37mm H					
Graphics Monitor cable	AMD Radeon™ Gra DisplayPort™, one I 3 independent displ when using HDMI p support 2 displays); Max resolution: 409 Optional DP to VGA	HDMI, or ays (sup ort or D 6x2160 0x1200	ne optional proports maxim P to DVI/HDN (DP)@60Hz; (VGA)@60H	ort (VGA, 2) um of 2 cor III dongles, 4096x2160 z	nd DP, or 2nd acurrent HDM and Athlon / (HDMI)@30	d HDMI), supports MI/DVI displays Athlon PRO only 0Hz;	VESA mount Floor Stand	2.91 lb (1.32 kg), weight may vary by configuration With VESA mount & ODD box: 7.42" W X 7.30" D X 2.48" H 188.4mm W X 185.38mm D X 63mm H 3.66 lb (1.66 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation					
	HDMI 1.4 dongle		, DF 10 DVI-L	dorigle, Dr	to dual DF	uongie, or DF to	Power supply	Some: 65 watts adapter, autosensing, 88% PSU (not included for TIO models) Some: 135 watts adapter, autosensing, 88% PSU (not included for TIO models)					
Chipset	AMD B300 Chipse						Limited warranty	1-year or 3-year, limited onsite service / service upgrades available					
Rear ports* (Std.) Rear ports* (Opt.	one USB 3.1 Gen1 one microphone (3. 1x USB 3.1 Gen1, 3 Two optional ports: * Depending on man	5mm), o 3x USB 2 Port 1 fo factors, a	one headphor 2.0, 1x etherr or VGA / 2nd l ctual data trans	ne / microph net (RJ-45), DP / 2nd HI sfer speed ma	one combo 1x DisplayP DMI / serial; ay be lower tha	jack (3.5mm) ort, 1x HDMI Port 2 for serial; an theoretical speed	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise Some: Linux Ubuntu					
Audio support	High Definition (HD)	<u> </u>				,	Environment	ENERGY STAR® 7.1*, EPEAT™ Silver rating* (*Not for non-OS models);					
WLAN	Some: 11ac wireles Wi-Fi + Blue		Jard, Realter .0 combo ada		E (duai ban	a),		ErP Lot 3; RoHS-compliant; TUV low noise verified					
	Some: 11ac wireles	ss, M.2 (etooth 4.	Card, Qualco .2 combo ada	mm Athero apter, 2x2			MIL-SPEC test	MIL-STD-810H military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)					
Bluetooth Ethernet	Wi-Fi + Blue Some: Bluetooth 4. Gigabit ethernet, Re	etooth 5. .2 / 5.0 v	.0 combo ada wireless, integ	apter, 2x2 grated in Wi	· -Fi + BT con	,,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com					
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, T	CG Cer	tified										













ThinkCentre M910 Tiny Platform Specifications

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

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





















ThinkCentre 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		
	Processor	Cores /	Frequency		Memory Support	Integrated	Ethernet (Opt.)	Gigabit ethernet, Inte	el Ethernet Conne	ction I219-LM(Jacks	sonville), Wake on LAN® rnet, 4x RJ-45, PCIe x4		
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	Manageability	Intel Active Manager			11161, 47 110-43, 1 016 74		
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610	Iviariageability	Intel vPro technology	v on some models	(require choosing a	vPro-support Wi-Fi		
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		adapter to enable vF	ro function through	h wireless connection	on)		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TO	CG Certified				
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630	Security teatures	Security slot (in re- Name	ar for optional	Boot sequence			
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610			 ington® MicroSaver® cable) Boot without keyboard and mousesis intrusion switch Individual USB port disablement 				
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		 Power-on password Administrator password Smart USB protection, allows ke mouse only, blocks all storage de 					
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630							
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		Hard disk password					
	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 Some: Lenovo Calli	itional Keyboard (L	JSB connector), bla	CK ISB rocciver) black		
	Core i7-8700T	6 / 12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB (connector), black	JOD receiver), black		
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Fing	erprint Mouse (US	B connector), Wind	ows Hello support, black		
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calli	ope Wireless Mou	se (2.4GHz via USE	3 receiver), black		
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color					
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		Toolless chassis of	crew)				
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		Toolless HDD, SSIOptional dust filter	ll				
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630				3.0 x8 slot (low-profi	le), two M.2 slots (one		
	Core i9-9900T	8 / 16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630		for WLAN, one for M.2 SSD), 2.5" HDD/SSD and PCIe card are m					
Memory	32GB max, DDR4-266								Dimensior	ns (WxDxH)	Weight (Approx.)		
Storage	* System automaticall Some: Hard Drive / S	ATA 6.00	Gb/s, 2.5", 5400 i	pm or 72		ory controller	-	Tiny only		.2" X 1.5" 3mm X 37mm	2.91 lb (1.32 kg), vary by config		
	Some: Solid State Dr Some: M.2 SSD / PC * 128GB SSD M.2 (22	le NVMe	, PCIe 3.0 x 4*, 3	32Gb/s	Cle 3.0 x 2.16Gb	n/s		With VESA mount & ODD box		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	Mémory m (9.0mr	(not support Ce n), via USB exte	leron / P rnal ODI	entium Processe D box	or), M.2	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			nd 100mm		
Onboard SATA	Some: DVD Burner (I One onboard SATA 6.	0Gb/s co	nnector	via USB	external ODD t	OX	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU					
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	MI, one o	optional video po	rt (2nd F	HDMÍ, VGA, 2nd	DP,							
	or USB 3.1 Type-C Ge Max resolution: 4096x	en1 with [:2304 (DF	DisplayPort funct P) @60Hz; 4096x	ion), up 2304 (Ty	to 3 independen /pe-C)@60Hz;	t displays;	Limited warranty	Some: 1-year or 3- Some: 1-year or 3-					
Monitor cable	Optional DP to VGA d	ongle, DF		e, DP to	dual DP dongle		Preload	Preloaded operatin					
Chipset	Display with intel integ	grated gra	iphics), or DP to	HDMI 1.	.4 dongle		-	Some: Windows 10 Preloaded applicati	Home 64-bit	isted)			
	* one USB 3.1 Gen1 (A	lways On	and fast charge), one U	SB 3.1 Type-C C	<u>a</u> en 1,		 Lenovo Vantage Microsoft Office pr 	, -	o.ou)			
Poor ports (Std.)	one microphone (3.5n * 2x USB 3.1 Gen2, 2x							purchase a produc					
Rear ports (Opt.)	* Two optional ports (mi	utually ex	clusive with PCI	e càrd):	Port 1 for VGA /	2nd DP /		 Cyberlink PowerD' 	VD (only for mode)	Is with DVD / DVD±	RW)		
oa. poo (op)	2nd HDMI / serial / US	SB 3.1 Ty	pe-C Gen 1 with	DP func	ction); Port 2 for s	serial;		Cyberlink Power20	GO (only for mode	Is with DVD±RW)			
	Optional ports via PCI	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9)-pin) via		LinkedInIntel Unite (Machir	ne Type 10\/8 mod	lale only)			
	PCle x1, 1x Thunderb							,	,,	• /	antar) or EDEATM Cilvar		
A al: a a	* Depending on many fac		<u>.</u>			eticai speed	Environment	rating (with 65W/90V), EPEAT™ Gold ra V adapter). FrP Lo	ating (with 135W ad of 3. TCO, TUV ultra	apter) or EPEAT™ Silver low noise verified (on		
Audio support	Realtek ALC233VB2 /			`	,		-	some models), RoHS					
WLAN		oth 4.2 c	ombo adapter, 1	x1 `	,,		MIL-SPEC test	MIL-STD-810G milita	ary certification (Lo	ow Pressure [Altitud	le], High Temperature, d Dust, Vibration, Shock,		
	Some: 11ac wireless		d, Realtek RTL8 ombo adapter, 2		dual band),			Fungus, Solar Radia		i iuiiiiuity, Sanu and	a Dust, Vibration, SHOCK,		
	Some: 11ac wireless	, M.2 Car	d, Intel Dual Bar	nd Wirele	ess-AC 3165,		Accessories	For compatible acce	,	to http://smartfind	I.lenovo.com		
	Wi-Fi + Blueto Some: 11ac wireless		ombo adapter, 1 d. Intel Dual Bar		ess-AC 8265.								
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2	•								
	Some: 11ac wireless		d, Intel Wireless ombo adapter, Ir			nort 2v2							
	vvi-ri + biuelo	юш э. 0 С	ombo adapter, Ir	ILEI VEIO	technology sup	ρυι, Ζ ΧΖ							



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pen	itium®, or 8	th / 9th Gen Intel C	ore™ i3	/ i5 / i7 / i9 Process	or		4x Mini Display	Port, up to 4 independent displays, works	s along with			
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		onboard DP and Max resolution:	d HDMI to support up to 6 independent di 5120x2880@60Hz ((up to 2 Mini Displ	ayPort);			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	1	Ontional DP to VGA don	4096x2160@60Hz ((up to 4 Mini Displagle, DP to DVI-D dongle, DP to dual DP of	ayPort) Jongle (for Collage Display			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Monitor cable	with intel integrated grap	phics), or DP to HDMI 1.4 dongle, Mini DF	of to DP			
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Chipset	Intel Q370 Chipset					
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	Front ports (Std.)*	<u> </u>	ays On and fast charge), one USB 3.1 Ty	no C Gon 1			
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Front ports (Std.)	one microphone (3.5mm	n), one headphone / microphone combo ja	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 US	i 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DP, 1x HDMI itional ports (mutually exclusive with PCle card): Port 1 for VGA / 2nd DP / 2nd HDMI USB 3.1 Type-C Gen 1 with DP function); Port 2 for serial; all ports via PCle card: 2x USB 3.1 Gen1 via PCle x1, 4x serial (9-pin) via PCle x1, 1x rbolt 3 (combo USB3.1 Type-C Gen 2 / DP) via PCle x4 nding on many factors, actual data transfer speed may be lower than theoretical speed: ALC233VB2 / optional internal speaker (1.5 watt or 2 watt) 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 11ac Vi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band), Intel vPro technology support, 2x2 Bluetooth 4.25.0 wireless, integrated in Wi-Fi + BT combo adapter ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCle x4				
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Rear ports (Opt.)*	Two optional ports (mutu					
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Optional ports via PCIe					
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo L					
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630							
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / o					
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN	Some: 11ac Wi-Fi + B					
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + B					
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	1						
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + B					
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	1	Intel vPro techi					
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400 DDR4-2400	UHD 630	Bluetooth Ethernet	Some: Bluetooth 4.2/5					
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400 DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet S					
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2400 DDR4-2666	UHD 630	Manageability		it Technology 12 (Intel AMT 12);	·			
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Intel vPro technology or	some models (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	adapter to enable vPro to Discrete TPM 2.0, TCG	function through wireless connection)				
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features	Security slot (in rear form)		ontrol			
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400 DDR4-2400	UHD 610	- Coodinity routinities	Kensington® MicroSav					
							-	 Chassis intrusion swit 	ch • Individual USB po	ort disablement			
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610	4	 Power-on password 	ver-on password • Smart USB protection, allows keyboard/				
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	4	Administrator passwordHard disk password	ra mouse only, block	s all storage devices			
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630	Koyboord	<u> </u>	e Keyboard (USB connector), black				
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610	Keyboard	Some: Lenovo Calliop	nal Keyboard (USB connector), black				
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630	1.	Some: Lenovo Calliop	e Wireless Keyboard (2.4GHz via USB re	ceiver), black			
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliop	e Mouse (USB connector), black orint Mouse (USB connector), Windows H	Iollo gupport, blook			
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	4	Some: Lenovo Callion	e Wireless Mouse (2.4GHz via USB recei	iver), black			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Machanical	Tiny (1L), black color; m	<u> </u>	,, 2.46.1			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mechanical	Toolless chassis open	(need optional toolless chassis screw)				
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		 Toolless HDD, SSD, m 					
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Optional dust filter DE have for LIDD/Co	SD and DCIa 2.0 v0 alat (law profile), thus	as M.O. slote (one for MI AN			
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	1	two for M 2 SSD) 2.5" H	SD, one PCIe 3.0 x8 slot (low-profile), thre IDD/SSD and PCIe card are mutually exc	elusive			
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	1	(110 101 11112 002), 210 1		1			
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630			Dimensions (WxDxH)	Weight (Approx.)			
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	.	Tiny only	7.0" X 7.2" X 1.5" 179mm X 183mm X 37mm	2.91 lb (1.32 kg), vary by config			
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		\\/;th\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\					
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630]	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			
Memory	32GB max, DDR4-2666* * System automatically cl					er	VESA mount Floor Stand	Optional VESA mount b	racket kit, supports VESA 75mm and 100 and for vertical orientation				
Storage	Some: Hard Drive / SA			7200 rp	m								
	Some: Solid State Drive Some: M.2 SSD (suppo	e (SSD) / S	SATA 6.0Gb/s, 2.5"	NIV/Ma	DCIa 2 0 v 4* 22Ch	10	Power supply	<u> </u>	er, autosensing, 88% PSU				
	RAID 0/1 suppo	rt (RAID n	reset only available	via spec	cial bid model)	J/S,	Limited warranty		ar, depot service / service upgrades ava				
	* 128GB SSD M.2 (2242) Some: Intel Optane™ N	PCIe NVI	Me only supports F	Cle 3.0	(2, 16Gb/s				ar, limited onsite service / service upgr	ades available			
Ontinal	Some: Intel Optane™ N	lemory (no	ot support Celeron	/ Pentium	n Processor), M.2		Preload	load Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit					
Optical	Some: DVD-ROM, slim Some: DVD Burner (DV	(9.0mm), /D+RW) s	via USB external C lim (9 0mm), via H	DD DOX SB exteri	nal ODD box								
Onboard SATA	One onboard SATA 6.0G	b/s connec	etor			enlay Port™	Environment	ENERGY STAR® 7.0, EPEAT™ Gold rating (North America), ErP Lot 3, TCO, TUV ultra low noise verified (coming soon, on some models), RoHS-compliant					
Graphics	Intel HD Graphics 610/6 one HDMI, one optional or USB 3.1 Type-C Gen1 Max resolution:c4096x23	video port with Displ	(2nd HDMI, VGA, 2 ayPort function), u	2nd DP, o to 3 ind	ependent displays;	spidyP0i1'™,	MIL-SPEC test	MIL-STD-810G military Low Temperature, Temp Solar Radiation)	certification (Low Pressure [Altitude], Higl erature Shock, Humidity, Sand and Dust,	n Temperature, Vibration, Shock, Fungus,			
		216Ò (ońbo	ard HDMI)@24Hz	2048x1	536 (VGA)@50Hz		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com					

















ThinkSmart Edition Tiny M920q for Zoom Rooms Platform Specifications

Processor	Intel® 9th Gen Core™	i7 Proces	sor				Keyboard		eyboard (USB connector), black			
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Mouse	Lenovo Calliope Mou	use (USB connector), black			
	Core i7-9700T	Threads 8 / 8	Base/Max(GHz) 2.0G / 4.3G	12 MB	(Up to) DDR4-2666	Graphics UHD 630	Mechanical	Tiny (1L), black color	r; metal case			
N4							1		Dimensions (WxDxH)	Weight (Approx.)		
Memory	16GB (8GB x 2) DDR						_	Tiny only	7.05" X 7.20" X 1.36"	2.91 lb (1.32 kg),		
Storage Optical	128GB SSD M.2 (224 None	2) PCIe N	IVIVIE only supp	orts PCI	ie 3.0 x 2, 16Gb/	S			179mm X 182.9mm X 34.5mm	vary by config		
Onboard SATA	One onboard SATA 6.	0Gb/s cor	nector				VESA mount	VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
Graphics	Intel HD Graphics 63						Floor Stand	1 ,				
	DisplayPort™, one HD up to 3 independent d		ard), one 2nd H	DIVII (Int	ernal DP to HDN	(II dongle),	Power supply		apter, autosensing, 88% PSU			
	Max resolution: 4096x)@60Hz; 4096x	2160 (o	nboard HDMI)@	24Hz			te service with premier support / s	ervice upgrades available		
Monitor cable	None	`	, ,	`			Preload	Preloaded operating system				
Chipset	Intel Q370 Chipset						F	Windows® 10 IoT Enterprise with Zoom Rooms preload ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, TUV ultra low				
Front ports (Std.)	* one USB 3.1 Gen1 (A						Environment	verified (on some mo	odels), RoHS-compliant	50, TOV ultra low noise		
Rear ports (Std.)	one microphone (3.5m * 2x USB 3.1 Gen2, 2x * Depending on many fac	UŚB 3.1 (Gen1, 1x ethern	et (RJ-4	l5), 1x DiśplayPo	rt, 2x HDMI	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temp Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibrat Fungus, Solar Radiation)				
Audio support	Realtek ALC233VB2 /	optional i	internal speaker	(1.5 wa	att or 2 watt)		A	For compatible accessories, please go to http://smartfind.lenovo.com				
WLAN	11ac wireless, M.2 Ca combo adapter, Intel v				band), Wi-Fi + B	luetooth 5.0	Accessories	For compatible acce	ssories, piease go to nttp://smartfin	a.ienovo.com		
Bluetooth Ethernet	Bluetooth 5.0 wireless Gigabit ethernet, Intel	s, integrate Ethernet	ed in Wi-Fi + BT Connection I21	combo 9-LM(Ja	adapter icksonville), Wak	e on LAN®						
Manageability Security chip	Intel Active Manageme Intel vPro technology adapter to enable vPro Discrete TPM 2.0, TCO	on some roof	models (require through wireles	choosin	ng a vPro-suppor	t Wi-Fi						
Security features	 S • Security slot (in rear Kensington® MicroS • Chassis intrusion sw • Power-on password • Administrator password • Hard disk password 	aver® cab vitch vord	le) • Boot • Indivi • Smar	without dual US t USB p	ce control keyboard and me BB port disableme protection, allows blocks all storage	ent keyboard/						

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

Lenovo, January 2020













ThinkCentre Tiny-in-One (TIO) 22 Gen3

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

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

ThinkCentre Tiny-in-One 22 Gen3 Compatible list										
Model	M93/p Tiny, M73 Tiny	Chromebox								
	M90n Nano (with TIO kit)									
Turn on TIO and Tiny together via Alt + P on USB KB	All models	All models	Not support							
Turn on TIO and Tiny together via TIO Power Button	All models	TIO models	All models							













ThinkCentre Tiny-in-One (TIO) 24 Gen3

Model	Non-touch model: Touch model:	10QYPAR1++/10QYPA 10QXPAR1++/10QXPA									
Form factor			nce when optional Tiny slots into								
Compatible Tiny:	P330 / P320 / M92 M625 / M600 / M75	5q / M715 / M93/p* / M8	s setup M710 / M900(x) / M700 / M630e / 3 / M73* / M53 /Chromebox Tiny essing power button of TIO								
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight										
Viewable image size	23.8" (604.7mm) d	otes: In-Plane Switching may refer to VA, PLS, and IPS panels 8.8" (604.7mm) diagonal 1.06" x 12.32" / 535.0mm x 313.0mm									
Max view area (W x H) Bezel Width	21.06" x 12.32" / 53 Top / Side: 2mm, B	35.0mm x 313.0mm ottom: 22.1mm									
Native resolution	1920x1080		ko on Touch								
Multi-touch Aspect ratio	16:9	nulti-touch, supports Wa	ke on Touch								
Pixel pitch (mm) Dot/Pixel per Inch	0.2745mm 92.6 dpi										
Brightness	250 nits or cd/m ² (t	ypical)									
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms									
Color gamut	72%										
Anti-reflective Viewing angle at 10:1 C	Anti-glare R178° (+/- 89°) horiz	ontal, 178° (+/- 89°) ver	tical								
Preset resolutions	640x350 @ 70Hz	0711- 7011- 7511-									
	640x480 @ 60Hz, 720x400 @ 70Hz	6/HZ, /2HZ, /5HZ									
	800x600 @ 60Hz,										
	1024x768 @ 60Hz 1152x864 @75Hz	, 7002, 7502									
	1280x800 @ 60Hz										
	1366x768 @ 60Hz	1280x1024 @ 60Hz, 72Hz, 75Hz 1366x768 @ 60Hz									
	1440x900 @ 60Hz, 75Hz 1600x1200 @ 60Hz, 70Hz, 75Hz										
	1680x1050 @ 60Hz										
Presets / user settings	1920x1080 @ 60H Presets: 25; user s										
On screen display		with digital user controls									
Control features			button (TIO / monitor mode), Menu button, Power button								
Tiny-in-One Power On		up button, Volume down	button Power button positioned on TIO								
	can turn on both TI	O and Tiny (only some	Finy support, see compatible list)								
Side ports (TIO)	One USB 3.1 Gen connected via USE		or M53 installed or USB 2.0								
	Notes: The USB p	orť is only availáble whe	n a Tiny is istalled or a PC is								
Side ports (Tiny)		via USB upstream port by installed Tiny (options	al)								
Rear ports 7	One DisplayPort in	port, one USB upstrear	n port, one power connector er, USB [supports USB 3.1 Gen1]								
3-III-1 Cable			g to Tiny installed (optional)								
Camera Internal Speaker	1080p camera with dual microphone for VOIP, LED indicator 2 watt x2										
Security	Security keyhole for	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								

0	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°
y	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,
	Windows certifications	EPEAT™ Silver rating, ULE Gold, TUV, VOC Windows 7 and Windows 10 certified
	Ship group	TIO 24 (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com

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













ThinkCentre Tiny-in-One (TIO) 27

Form factor	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into the back of TIO, clean cabling and effortless setup	Mechanical		TIO without stand	TIO	with stand		
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny		Dimensions (W x D x H	614.0 x 73.89 x 413.1	614.0 x 329.0) x 444.25 - 554.25		
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight **Notes: In-Plane Switching may refer to IPS, PLS, ADS, AHVA, and AA		mm / inch)	/ 24.17 x 2.91 x 16.26	/ 24.17 x 12.	95 x 17.49 - 21.82		
Viewable image size Max view area (W x H)	27" (685.8mm) diagonal 23.49" x 13.22" / 596.7mm x 335.7mm		Weight (Approx.)	4.91 kg / 10.82 lb	7.95 k	g / 17.53 lb		
Bezel Width Native resolution Multi-touch Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch	Top / Side: 2mm, Bottom: 23.3mm 2560x1440 None 16:9 0.2331mm 109 dpi	Mounting features Adjustable stand	meeting the VESA FPMPMI® (100mm mount)					
Brightness Contrast ratio	350 nits or cd/m² (typical) 1000:1 (typical)	Power supply	170 watts adapter	, 88% PSU, universal				
Pixel response time Color gamut	14ms (default), over drive to 4ms, 6ms 99% sRGB	Power consumption Limited warranty		7 watts maximum, <0.5 Exchange Service (US				
Anti-glare	Yes (25%)	Limited warranty	Service (EMEA)	exchange Service (US	and EIVIEA) or	Customer Carry-in		
Viewing angle at 10:1 C	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical 640x350 @ 70Hz 640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz 800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz 1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1280x800 @ 60Hz 1440x900 @ 60Hz, 72Hz, 75Hz 1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1680x1050 @ 60Hz 1920x1080 @ 60Hz	VESA-compliant Ergonomics Emission standards Environmental Windows certification Ship group Accessories Model	ISO 9241-307, TU FCC Class B TCO 8.0, TCO Edi EPEAT™ Silver rat Windows 7 and W TIO 27 (Monitor), and driver CD For compatible acc ThinkCentre Tiny P330 / P320 / M920(x)	TCO 8.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0, EPEAT™ Silver rating, ULE Gold, TUV, VOC Windows 7 and Windows 10 certified TIO 27 (Monitor), detachable stand, power adapter, power cord, referer				
Presets / user settings On screen display	2560x1440 @ 60Hz Presets: 27; user settings: 25 On screen display with digital user controls (8 languages)		M710 / M900(x) / M70 M600 / M75q / M715 M90n Nano (w	7 / M83 / M53 Tiny	M73 Tiny			
Control features	Ftont: Exit button, Left / Mode-switching button (TIO / monitor mode), Right / Brightness button, Enter / Menu button, Power button Bottom: Volume up button, Volume down button	Turn on TIO and Tiny together via Alt + P on USB KB	All mod	dels	All models	Not support		
Tiny-in-One Power On Side ports (TIO)	Pressing Alt + P on keyboard or pressing Power button positioned on TIO can turn on both TIO and Tiny (only some support, see Compatible Matrix) Two USB 3.1 Gen1 (downgrade to USB 2.0 when installing M73 or M53 or connecting USB 2.0 via USB upstream port), one headphone / microphone	Turn on TIO and Tiny together via TIO Power Button	n on TIO and y together via All models TIO mode					
Side ports (Tiny) Rear ports 3-in-1 Cable Camera Internal Speaker Security	combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream, DisplayPort(in), or HDMI(in) port Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional) RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator 2 watt x2 Security keyhole for attachment of optional cable lock (Kensington® lock compatible), locks optional Tiny with TIO together, more security features offered by Tiny installed (optional)							













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th / 9th Gen	Intel Co	ora™ i3 / i5 / i7 / i0	Processor	Μ/Ι ΔΝΙ13	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),		
1 10063301		Cores /	Frequency		Memory Support		VVLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),		
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,		
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,		
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	DI t tl. TM	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter		
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt)	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4		
	Core i3-8300	4/4 6/6	3.7G 2.8G / 4.0G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Bitland BN8E88*, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)		
	Core i5-8400 Core i5-8500	6/6	3.0G / 4.1G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630		* Choose either I350-T4 or BN8E88		
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Manageability	None		
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified		
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Security features	• Security slot (in rear for optional • Power-on password		
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) ◆ Administrator password		
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control 		
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		both keyboard and mouse • Boot without keyboard and mouse		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement 		
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices		
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black		
Memory	64GB max, UDIMM,	DDR4-26	66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
•	dual-channel capable							Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
	* System automatical	,				ry controller	Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
Storage	Some: Hard Drive / S	SATA 6.00	3b/s, 2.5" or 3.5"	, 5400 rp	om or 7200 rpm			Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black		
	Some: Solid State D Some: M.2 SSD (22-	rive (SSL 42 / 2280) / SAIA 6.0GD/S) / PCIA NVMA F	5, 2.5" PCIA 3 0	v2 or PCIa 3.0 v/	1		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
							Mechanical			
Optical							iviechanicai	 Tower (15L), black color, metal case (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm 		
Only a sud CATA								Approx. 15.21 lb (6.9 kg), weight may vary by configuration		
Onboard SATA Media reader								Optional dust filter		
Graphics							-	Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD		
Graphics	one VGA (up to 2048x1536@50Hz), two DisplayPort™ (up to 4096x2304@60Hz),							Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)		
supports 3 independent displays, more displays support via discrete graphics							Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16			
	Some: NVIDIA Geforce® GT 730 (End Of Lifé), DirectX 12, 2GB, PCle 2.0 x16, 35 watts, two DisplayPort (up to 3840x2160@60Hz) Some: AMD Radeon™ 520, DirectX 12, 2GB GDDR5, PCle 3.0 x8, 30 watts,						Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1			
							Slot 3: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x1 Slot 4: no slot, only bracket for optional port extension			
			1096x2160@60F		Ole 3.0 x0, 30 W	ratio,		M.2 card slots: Two (one for WLAN, one for SSD/Optane)		
	Some: AMD Radeon	າ RX 550)	, DirectX 12, 4G	B'GDDF	R5, PCle 3.0 x8, 5	50 watts,	Power supply	Some: 180 watts, autosensing, 85% PSU		
			3840x2160@60H				1 ower suppry	Some: 210 watts, autosensing, 85% PSU		
Monitor Cable	Optional DP to VGA	donale D	e VGA (up to 20- P to DVI-D donal	48X 1536 A DP to	@85HZ) dual DP donale (for Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
oo. Gabio	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	.4 dongle	ioi oollage	Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available		
Chipset	Intel B360 Chipset	<u> </u>	. ,,				1	Some: 1-year or 3-year, limited onsite service / service upgrades available		
	· · · · · · · · · · · · · · · · · · ·	/ LICE 2 1	Cont 1v LISB 3	1 Typo	C Gon1 (15W ob	orging)	Preload	Preloaded operating system		
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)						aigiiig), n)		Some: Windows® 10 Pro 64-bit		
Front ports* (Opt.) Optional: 1x media reader							Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
Rear ports* (Std.) 4x USB 2.0, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,							Lenovo Vantage			
1x line-out (3.5mm)							Microsoft Office preloaded;			
Rear ports* (Opt.) Optional: 2x USB 3.1 Gen1 via PCle x1**, 2x USB 3.1 Type-C Gen2 via PCle x4** (special bid only), 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1, 1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 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								purchase a product key to activate		
								Cyberlink PowerDVD (only for models with DVD / DVD±RW)		
								 Cyberlink Power2GO (only for models with DVD±RW) LinkedIn 		
							Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,		
ended entire Ex cep en den el Ex cep en type e den							LIMIOIMIEM	TUV low noise verified (coming soon, on some models), RoHS-compliant		
Audio support	High Definition (HD)	Audio, Re	aitek ALC233VB	2 / Interr	nai speaker (2 wa	itt)	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
				7 10003301103	1 of companies accessories, please go to map in a maneriovo.com					





















ThinkCentre M920 Tower Platform Specifications

Пиологом	Intel® Coloron® Intel	Dantium®	or Oth /Oth Con	Intal Car	10TM :0 / :E / :7 / :0	Drasassar		LICER 1 Time C. Con 0 / Display Port) via PCIa v4 (available on 00/00/0010)
Processor	Intel® Celeron®, Intel			intel Col				USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	_	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Intel vPro technology support, 2x2
	Pentium Gold G5600 Pentium Gold G5420	2/4	3.9G 3.8G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630 UHD 610	Bluetooth™	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Linemet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	a.rageasy	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	Caarmiter alain	adapter to enable vPro function through wireless connection)
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (in rear for optional Power-on password Administrator password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		 Kensington® MicroSaver® cable) Padlock loop Administrator password Hard disk password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control
	Core i3-9320 Core i5-9400	6/6	3.7G / 4.4G 2.9G / 4.1G	8 MB 9 MB	DDR4-2400 DDR4-2666	UHD 630 UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9400 Core i5-9500	6/6	2.9G / 4.1G 3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	,	Some: Lenovo Traditional Keyboard (USB connector), black
Momory							-	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
Memory 64GB max, DDR4-2666*, four 288-pin DIMM sockets, dual-channel capable * System automatically clocks down for the processors with lower memory controller						Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black	
Storage Some: Hard Drive / SATA 6.0Gb/s, 2.5" or 3.5", 5400 rpm or 7200 rpm		.,		me: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, bla				
Ciolago	Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Some: M.2 SSD (2242 / 2280) / PCIe NVMe, PCIe 3.0 x2 or PCIe 3.0 x4				Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
			4		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
Ontical	Some: Intel Optane™ Memorý (not support Ćeleron / Pentium Processor), M.2 Optical Optical Optional DVD-ROM or DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0mm) Four onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only					Mechanical	Tower (18L), black color, metal case (MAD-1/1) S. FII X 10 S. FII X 1	
								 (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm Approx. 15.45 lb (7 kg), weight may vary by configuration
available via special bid model)								Toolless cover, disk, optical, extension card removal
Media reader	Optional 7-in-1 media							Optional carry handle, dust filter
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main n	nemory, DirectX®	12,		Bay 1: Slim external ODD bay Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD
	one VGA (up to 2048 supports 3 independe							Bay 3: 3.5", 1" high, internal, HDD/SSD
	Some: NVIDIA Gefor	rce® GT 7	30 (End Of Life)	, DirectX	12, 2GB GDDR	5,		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)
	PCIe 2.0 x16,	35 watts,	two DisplayPort	(up to 3	840x2160@60Hz	z)		Bay 5: 2.5", internal, HDD/SSD (optional bay)
	Some: AMD Radeon		irectX 12, 2GB 0 4096x2160@60F		PCIe 3.0 x8, 30 v	vatts,		Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)
	Some: AMD Radeon				R5, PCIe 3.0 x8, 5	50 watts,		Slot 1: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16
	one DisplayPo	ort (up to	3840x2160@60I	Hz), one	HDMI (up to	,		Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1
			e VGA (up to 20			DDDE		Slot 3: full-length (< 268mm) full-height (< 112mm), PCIe 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension
	Some: NVIDIA Gefor	120 watts	s 1x DVI-D (up t	o 2560x1	1600@60Hz) 1x	HDMI (up		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	to 4096x2160	@60Hz),	3x DP (up to 512	20x3200	@60Hz), occupie	es two slots	Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor Cable	Optional DP to VGA (aongie, טו	ם-ivu dong	e, DP to	dual DP dongle	(for Collage	1 ower supply	Some: 250 watts, autosensing, 85% PSU
Display with intel integrated graphics), or DP to HDMI 1.4 dongle					.4 dongle	-	Some: 400 watts, autosensing, 92% PSU (only available via special bid)	
Chipset Intel Q370 Chipset						Limited warranty		
Front ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x USB 3.1 Type-C Gen1 (15W charging),							Some: 1-year or 3-year, limited onsite service / service upgrades available	
1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm)					ombo jack (3.5mi	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit	
Front ports* (Opt.) Optional: 1x media reader Rear ports* (Std.) 4x USB 3.1 Gen1, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,								
1x line-out (3.5mm)						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,	
Rear ports* (Opt.) <i>Optional:</i> 2x USB 2.0, 2x USB 3.1 Gen1 via PCle x1, 2x USB 3.1 Type-C Gen2 via PCle x4 (special bid only), 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1,							TUV low noise verified (coming soon, on some models), RoHS-compliant	
	1x parallel (25-pin), 2						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
	17 parallel (25-plll), 2	.x F3/2 pc	n io (Neyboaiu/III					

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

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

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

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U.S. EMEA

Summary of Changes

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

March 4, 2020 - Version 556

► Add Core i5-9400F on ThinkStation P330 Tower Gen 2 and ThinkStation P330 SFF Gen 2

December 31, 2019 - Version 553

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

December 11, 2019 - Version 552

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

August 7, 2019 - Version 546

► Update processor information on Thinktation P330 Tiny

July 17, 2019 - Version 545

► Update EPEAT rating to Silver on most ThinkStation

June 26, 2019 - Version 544

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

May 15, 2019 - Version 542

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

March 13, 2019 - Version 539

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

February 20, 2019 - Version 538

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

August 22, 2018 - Version 529

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

August 1, 2018 - Version 528

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

June 20, 2018 - Version 526

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

May 30, 2018 - Version 525

► Added ThinkStation P720/P920 EMEA May 2018 models

April 18, 2018 - Version 523

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

March 28, 2018 - Version 522

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

March 7, 2018 - Version 521

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

January 30, 2018 - Version 519

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

December 20, 2017 - Version 517

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

September 29, 2017 - Version 513

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

September 12, 2017 - Version 512

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

August 23, 2017 - Version 511

▶ New ThinkStation P320 Tiny models announced on August 2017

August 2, 2017 - Version 510

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

June 21, 2017 - Version 508

► New ThinkStation P320 Tiny announced on June 2017

May 26, 2017 - Version 507

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

April 19, 2017 - Version 505

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

March 29, 2017 - Version 504

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

January 25, 2017 - Version 501

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

January 4. 2017 - Version 500

► Added ThinkStation P310 models announced on December 2016

December 14, 2016 - Version 499

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

November 23, 2016 - Version 498

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

October 12, 2016 - Version 496

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

August 3, 2016 - Version 493

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

July 13, 2016 - Version 492

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

June 22, 2016 - Version 491

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

June 2, 2016 - Version 490

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

May 19, 2016 - Version 489

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

April 27, 2016 - Version 488

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

April 6, 2016 - Version 487

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

March 23, 2016 - Version 486

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

February 24, 2016 - Version 485

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

December 9, 2015 - Version 482

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

November 18, 2015 - Version 481

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









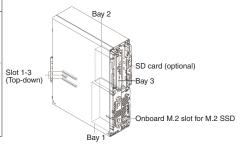


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

Components	Specification									
Form factor										
	8.4L mini-tower				(0.0.1			(121)		
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)									
	Supports one of the following processor:									
	Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 (260W PSU needed)									
	Xeon E-2276G					DR4-2666				
	Xeon E-2274G	4C/8T/	4.0GHz/	8MB/83	W/DDR	4-2666				
	Xeon E-2246G	6C/12	Γ/3.6GHz	/12MB/	80W/DI	DR4-2666	;			
	Xeon E-2244G		3.8GHz/							
	Xeon E-2236					DR4-2666	5			
	Xeon E-2234		3.6GHz/							
	Xeon E-2226G		3.4GHz/							
	Xeon E-2224G		3.5GHz/							
	Xeon E-2224 Xeon E-2174G		<u>/3.4GHz/8</u> /3.8GHz/8							
Processor	Core i9-9900					4-2000 DR4-2666	:			
	Core i7-9700		3.0GHz/				1			
	Core i7-8700					DR4-2666				
	Core i5-9600		3.1GHz/							
	Core i5-9500		3.0GHz/							
	Core i5-9400F		2.9GHz/							
	Core i5-9400	6C/6T/	2.9GHz/	9MB/65	W/DDR	4-2666				
	Core i5-8500		3.0GHz/							
	Core i3-9300		3.7GHz/							
	Core i3-9100		3.6GHz/							
	Core i3-8300		3.7GHz/							
	Core i3-8100 Pentium Gold G5620		<u>/3.6GHz/</u> /4.0GHz/							
Chinaat		20/41/	4.0GHZ/	41010/34	חטטיייי	4-2400				
Chipset	Intel C246 Chipset	0 -1	-1-							
Memory Sockets	4 DIMM sockets with 2									
Memory Types	8GB/16GB DDR4-266 4GB/8GB/16GB/32GE				n-ECC					
Memory Capacity	64GB with 4 x 16GB f					1 x 32GB	UDIMM noi	n-ECC		
Memory Protection	ECC on models with l	JDIMM I	ECC mer	meory						
	Three PCIe 3.0 slots	as follo	wing:							
	Slot 1 PCle 3.0 x16,	low pro	file. links	s to CP	U					
Expansion slots	Slot 2 PCIe 3.0 x1, low profile, links to PCH									
	Slot 3 PCIe 3.0 x16 (negotiable link width x4), low profile, links to PCH									
		<u> </u>				<u> </u>				
Dua	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD Graphics 630 in Core i5 or i3 processors.									
Processor graphics	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 x			rete gra	aphics	adapter (Slot 1 and	3). Supports		
	the following graphic	s adapt	ers:							
Discrete graphics	Adapter Cor		emory	Power		nectors	Max qty			
card	Quadro P400 25		GDDR5			miniDP	2			
	Quadro P620 51		GDDR5			miniDP	2			
	Quadro P1000 64	0 4GB	GDDR5	_		miniDP	2	DAID		
	Storage Controller	ATA DAI	Type				cr CCD	RAID		
Storage Controller	Onboard Intel RST Sa Onboard Intel RST Po				6Gb/s		or SSD Cle SSD	0/1		
	Notes: M.2 SSD support is			•				U/ I		
						ioi inore ini		01		
		erface	RPM		Offering	TD	Ma	x Qty		
		A 6Gb/s			3/2TB/4			2		
Storage Support		A 6Gb/s A 6Gb/s)GB FIF 3/512GE			2		
	Optane Memory PCI			20000	32GB	בוווע	1. used wi	th HDD/SSD		
		e NVMe		256GE	3/512GE	3/1TB	., acca wi	3		
	: : : : : : : : : : : : : : : : : :									

Wake-on-LAN. Optional PCIe ethernet adapters are available Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and priock 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 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 Zx 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 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 Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Optional rear ports Optional rear ports Optional rear ports Optional rear ports Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-10 °C to 60 °C) Non 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) Operating: operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Environmental Certification Supports one 210W or 260W power supply. 210W is 100V - 240V, 85% PSU, Climate Savers Computing Bronze and 80 PLUS Bronze qualified		Components	Specification
Storage bay Bay 2 2.5" SATA bay (Optional) Bay 3 9mm Slim ODD bay M.2			Up to 3 bays with two disk bays and one slim optical bay:
Bay 3 9mm Slim ODD bay M.2 3x M.2 SSD (1 onboard, 2 via PCle to M.2 adapter) Woles: Support 1x M.2 SSD at present, 3x M.2 SSD support is pending availability M.2 slot for Wi-Fi and Bluetooth 2 4GHz/SGPL2 (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps Media reader Optional 7-in-1 card reader on most models Network interfaces Network interfaces Network interfaces One onboard GBE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional PCle ethernet adapters are available Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and processor. Intel VPro Intel AMT Intel Adtive Management Technology 12 on Xeon models, Intel Standard Manageability on other models US models comes with 3-year limited onsite service with 9x5/NBD. Intel Audio Intel HD Audio interface with Realtek ALC233 Codec Front ports Yus B 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 Audio Ine-out Notes: DP needs Core, Pentium, or G suffix Xeon processor Supports the following via cable: 1x COM. 1x Parallel: 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Optional rear ports Optional rear ports Altitude Operating: 50 ° F to 95 ° F (10 ° C to 35 ° C) Non operating (no package): 14 ° F to 140 ° F (-10 ° C to 60 ° C) Non operating (with package): 20%-90%, non-condensing Environmental Certification Robers Supports the GREENGUARD. EPEAT Silver rating and ENERGY STAR POWER SUPPORT STAR POWER STAR POWER SUPPORT STAR POWER SUPPORT STAR POWER SUPPORT STAR POWER SUPPORT S			
M.2 Sx M.2 SSD (1 onboard. 2 via PCIe to M.2 adapter) Motes: Support 1x M.2 SSD at present, 3s M.2 SSD support is pending availability M.2 slot for Wi-Fi and Bluetooth 2,4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps Media reader Optional 7-in-1 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 Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and p. lock Intel vPro Supports Intel vPro on Xeon models. VPro also requires Wireless-AC 9560 if Wi-Fi is needed Intel AdT Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models US models comes with 3-year limited onsite service with 9x5/NBD. I 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 7x 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 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 sutfix Xeon processor Supports the following via Cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Optional rear ports Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (with package): 20%—90%, non-condensing Environmental Certification 90 Complaint. GREENGUARD. EPEAT Silver rating and ENERGY STAR Power supply 120 V = 240V, 85% PSU, Climate Savers Computing Platinum and 8 PLUS Platinum qualified ISV certifications Please visit www.thinkworkstations.com/isv-certifications/		Storage bay	
M.2 slot for Wi-Fi and Bluetooth Detailed on Board 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 7-in-1 card reader on most models Network interfaces One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional Pcle ethernet adapters are available Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection of the power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection of the power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection of the power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection of the power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and protection optional chassis intrusion switch, E-lock, cable lock, Kensingt			
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Type-C. 1x Mic-in. 1x Combo jack 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 Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Altitude Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) Humidity Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/		HD Audio	Intel HD Audio interface with Realtek ALC233 Codec
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 Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCle adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDM needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Temperature Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (mo package): -40 °F to 140 °F (-10 °C to 60 °C) Non operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Altitude Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/		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
Optional rear ports 1x 'COM. 1x Parallel. Žx PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -6 suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Temperature Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (mo package): -40 °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) Uperating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/		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
4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Altitude Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) Humidity Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/		Ontional rear ports	1x COM. 1x Parallel. Žx PS/2. 1x DP or 1x HDMI. 2x USB 2.0
Temperature Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C) Altitude Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) Humidity Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified ISV certifications Please visit www.thinkworkstations.com/isv-certifications/		Optional roal ports	4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor
Altitude Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft) Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/		Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)
Humidity Storage (with package): 20%~90%, non-condensing Environmental certification RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR qualified 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 8 PLUS Platinum qualified ISV certifications Please visit www.thinkworkstations.com/isv-certifications/		Altitude	Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)
certification qualified 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 8 PLUS Platinum qualified ISV certifications Please visit www.thinkworkstations.com/isv-certifications/	7	Humidity	
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 8 PLUS Platinum qualified SV certifications Please visit www.thinkworkstations.com/isv-certifications/	1		RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7
ISV certifications Please visit www.thinkworkstations.com/isv-certifications/			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

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















ThinkStation P330 Tiny Platform Specifications - I of II

Components	Specification	Specification										
Form factor	Optional floor s Optional tool-le	1L. Optional VESA mount bracket kit, supports VESA 75mm and 100mm. Optional floor stand for vertical orientation. Optional tool-less chassis open. Optional dust filter										
Dimensions	•	Height: 179 mm (7.0 in). Width: 37 mm (1.5 in). Depth: 183 mm (7.2 in)										
Weight		Maximum configuration: 2.9 lb (1.3kg)										
Recommended monitors		Lenovo recommends ThinkVision P series monitors for best display performance and productivity										
	Supports one of	Supports one of the following:										
	Processor Number	Cores	Threads	Base Frequency	Cache	TDP	Memory Types	Processor Graphics				
	Core i9-9900T	8	16	2.1GHz	16MB	35W	DDR4-2666	Intel UHD Graphics 630				
	Core i7-9700T	8	8	2.0GHz	12MB	35W	DDR4-2666	Graphics 630				
	Core i7-9700	8	8	3.0GHz	12MB	65W	DDR4-2666	Intel UHD Graphics 630	1			
	Core i5-9600T	6	6	2.3GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630				
	Core i5-9600	6	6	3.1GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	ı			
	Core i5-9500T	6	6	2.2GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	1			
	Core i5-9500	6	6	3.0GHz	9MB	65W	DDR4-2666	Graphics 630				
	Core i5-9400T	6	6	1.8GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630				
	Core i5-9400	6	6	2.9GHz	9MB	65W	DDR4-2666	Graphics 630				
	Core i3-9320	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD Graphics 630	lá			
	Core i3-9300T	4	4	3.2GHz	8MB	35W	DDR4-2400	Intel UHD Graphics 630	I.			
Procesor	Core i3-9300	4	4	3.7GHz	8MB	62W	DDR4-2400	Graphics 630				
Processor	Core i3-9100T	4	4	3.1GHz	6MB	35W	DDR4-2400	Intel UHD Graphics 630	1			
	Core i3-9100	4	4	3.6GHz	6MB	65W	DDR4-2400	Graphics 630				
	Core i7-8700T	6	12	2.4GHz	12MB	35W	DDR4-2666	Intel UHD Graphics 630				
	Core i7-8700	6	12	3.2GHz	12MB	65W	DDR4-2666	Graphics 630	╟			
	Core i5-8600T	6	6	2.3GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	!			
	Core i5-8600	6	6	3.1GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	5			
	Core i5-8500T	6	6	2.1GHz	9MB	35W	DDR4-2666	Graphics 630	l r			
	Core i5-8500	6	6	3.0GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	E			
	Core i5-8400T	6	6	1.7GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	F			
	Core i5-8400	6	6	2.8GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630				
	Core i3-8300T	4	4	3.2GHz	8MB	35W	DDR4-2400	Intel UHD Graphics 630	F			
	Core i3-8300	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD Graphics 630				
	Core i3-8100T	4	4	3.1GHz	6MB	35W	DDR4-2400	Intel UHD Graphics 630				
	Core i3-8100	4	4	3.6GHz	6MB	65W	DDR4-2400	Intel UHD Graphics 630	_ `			
Chipset	Intel Q370 Chip							-				
Memory	2 DIMM socket		34-2666.	SoDIMM. N	lon-EC	С			_ _			
Memory Capacity	64GB (2x 32GE	3)										

	Components	Specification						
	Expansion slots	One PCIe slot via specific riser card: PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card;						
		PCIe 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter						
	Graphics					ocessor graphics only. or graphics plus a discrete graphics		
_	Graphics - Processor graphics	support multi-disp	lay	<u> </u>		along with discrete graphics to		
ı l		One of the followi	ng dis	screte graphics	cards	s on 35W processor models:		
	Graphics - Discrete graphics card		Cores		Pow- er	Connectors		
$\left\{ \ \right $		Quadro P620 Quadro P1000		2GB GDDR5		4x miniDP		
						9set, 6Gbps SATA, one onboard		
	Storage controllers	SATĂ port for 2.5"	HDD			'		
	Internal storage bay	•				rete graphics card		
	Disks M.2 slot for SSD					, 5.4K; or 1TB SATA 6Gbps, 7.2K M.2 2280 SSD, one for M.2 2280		
	M.2 SSD	M.2 2280 SSD su M.2 2242 SSD su						
	Optane memory					m. Optane memory must work with		
	M.2 slot for Wi-Fi and Bluetooth	following: Intel Wireless-AC Bluetooth 5, up to Intel Wireless-AC 867Mbps.	9560 1.73 8265	, 2x2, 2.4GHz Gbps. , 2x2, 2.4GHz	/5GHz /5GHz	i-Fi card, supports one of the (160MHz channels), 802.11ac, 802.11ac, Bluetooth 4.2, up to not be supported in some countries		
	Wi-Fi antenna	Optional Tiny 2.40						
	Optical	Optional one 9.0n VESA mount is re			optica	I drive kit, DVD-ROM or DVD±RW.		
11	Media reader	None. Using USB						
	Network interfaces	Wake-on-LAN. Op	otiona	l Intel i350-T4	for 4x	it ethernet Intel i219LM, supports GbE ports, using PCle slot		
	Security features	Chassis intrusion	switc	h. Optional Ke	nsingt			
	Intel vPro Technology		3600T	. Core i5-8600). Core	processors: Core i7-8700T, Core i5-8500T, Core i5-8500. is needed		
	Systems management	Intel Active Mana Intel Standard Ma	inage	ability on othe	r mode	els		
	Base warranty					e service with 9x5/NBD. IBD in EMEA or other GEOs		
H	HD Audio	Intel HD Audio int	erface	with Realtek	ALC2	33 Codec		
	Front standard ports	Combo jack				SB 3.1 Gen 1 Type-C. 1x Mic-in. 1x		
	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						
	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 or	ie CC	VIVI				

ThinkStation P330 Tiny Platform Specifications - II of II

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













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

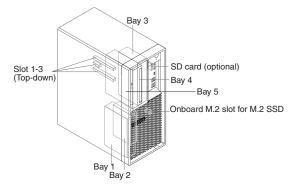
Note: 2x Quadro P2000, Quadro P4000, Quadro P5000, or Quadro RTX 4000 needs 400W PSU

Components	Specification			Components Specification					
Form factor	18L Tower				Storage Controller Type Interface Disk Type RAID				
Dimensions	Height: 376 mm (14	1.8 in). Width: 165 mm (6.5 in). Depth: 328 i	mm (12.9 in)	Storage Controller					
Weight		ation: 28.22 lb (12.8kg)	(12.0)	-	Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1				
vvoigitt		e following processors:			Disk Type Interface RPM Offering Max Qty				
			2011/2011		3.5" SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB 3				
	Xeon E-2286G	6C/12T/4.0GHz/12MB/95W/DDR4-2666 40			2.5" SATA HDD SATA 6Gb/s 7.2K 500GB FIPS 4				
	Xeon E-2278G Xeon E-2276G	8C/16T/3.4GHz/16MB/80W/DDR4-2666 40 6C/12T/3.8GHz/12MB/80W/DDR4-2666	JUW PSU needed	Storage Support	2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB 4				
	Xeon E-2274G	4C/8T/4.0GHz/8MB/83W/DDR4-2666			Optane Memory PCIe NVMe 32GB 1,				
	Xeon E-2246G	6C/12T/3.6GHz/12MB/80W/DDR4-2666			used with HDD/SSD				
	Xeon E-2244G	4C/8T/3.8GHz/8MB/71W/DDR4-2666							
	Xeon E-2236	6C/12T/3.4GHz/12MB/80W/DDR4-2666			Up to five bays with four disk bays plus one slim optical bay, supports up to 3 3.5" HDD plus 1x 2.5" SSD, or 4x 2.5" HDD/SSD				
	Xeon E-2234	4C/8T/3.6GHz/8MB/71W/DDR4-2666							
	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	2014/ DOLL		Bay 3 Secondary disk bay, 3.5" or 2.5"				
	Xeon E-2186G Xeon E-2174G	6C/12T/3.8GHz/12MB/95W/DDR4-2666 40 4C/8T/3.8GHz/8MB/71W/DDR4-2666	JOW PSU needed	Ot D	Bay 4 5.25" Flex bay, supports one of the following:				
Processor	Core i9-9900K	8C/16T/3.6GHz/16MB/95W/DDR4-2666 40	20W PSII poodod	Storage Bays	Flex module for optional front eSATA/Thunderbolt/IEEE1394				
	Core i9-9900	8C/16T/3.1GHz/16MB/65W/DDR4-2666	JOW I JO Needed		 3rd disk bay, 3.5" or 2.5", removable, via Front Access Storage 				
	Core i7-9700K	8C/8T/3.6GHz/12MB/95W/DDR4-2666 40	00W PSU needed		Enclosure, using SATA 4 connector as eSATA mode				
	Core i7-9700	8C/8T/3.0GHz/12MB/65W/DDR4-2666			 3rd disk bay, 3.5" or 2.5", via 5.25" to 3.5" HDD Kit 				
	Core i7-8700	6C/12T/3.2GHz/12MB/65W/DDR4-2666			Bay 5 9mm Slim ODD bay				
	Core i5-9600K	6C/6T/3.7GHz/9MB/95W/DDR4-2666 40	00W PSU needed		M.2 3x M.2 SSD (1 onboard. 2 via PCIe to M.2 adapter)				
	Core i5-9600	6C/6T/3.1GHz/9MB/65W/DDR4-2666		Media reader	Optional 7-in-1 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 i5-9400F	6C/6T/2.9GHz/9MB/65W/DDR4-2666		interfaces	Wake-on-LAN. Optional PCIe ethernet adapters are available				
	Core i5-9400 Core i5-8500	6C/6T/2.9GHz/9MB/65W/DDR4-2666 6C/6T/3.0GHz/9MB/65W/DDR4-2666			One dedicated enhant M.2 plot for entire all Intel Wireless AC 0560, 2v2				
	Core i3-9300	4C/4T/3.7GHz/9MB/62W/DDR4-2400		WLAN + Bluetooth	2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps				
	Core i3-9100	4C/4T/3.6GHz/6MB/65W/DDR4-2400			Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant				
	Core i3-8300	4C/4T/3.7GHz/8MB/62W/DDR4-2400		Security features	Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and pa				
	Core i3-8100	4C/4T/3.6GHz/6MB/65W/DDR4-2400			lock				
Chipset	Intel C246 Chipset			Intel vPro	Supports Intel vPro on Xeon models.				
Memory Sockets	4 DIMM sockets with	2 channels			vPro also requires Wireless-AC 9560 if Wi-Fi is needed				
Memory Types	8GB/16GB DDR4-26	666 UDIMM ECC or		Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models 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				
, ,,		B DDR4-2666 UDIMM non-ECC							
Memory Capacity		for UDIMM ECC or 128GB with 4 x 32GB UE	DIMM non-ECC	Base warranty					
Memory Protection		UDIMM ECC memeory		HD Audio	Intel HD Audio interface with Realtek ALC233 Codec				
	Three PCIe 3.0 slot			Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1				
Expansion slots		6, full height, half length, links to CPU		Tioni ports	Type-C. 1x Mic-in. 1x Combo jack				
Expansion sists		full height, full length, links to PCH		Boor porto	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP.				
		(negotiable link width x4), full height, half	<u> </u>	Rear ports	1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor				
	Integrated Intel UHI	D Graphics P630 in -G suffix Xeon process	sors, or Intel UHD	Optional front					
Processor graphics	Graphics 630 in Co	re i7, i5, i3, or Pentium processors.		ports (on flex	2x Thunderbolt (USB Type-C), one of two ports supports video-out. 1x eSATA. 1x IEEE1394				
	Works along with di	iscrete graphics to support multi-display, er	nables three rear	module)					
		(2 DP standard, 1 DP or HDMI optional)		-	Supports the following via cable:				
	to two PCIe 3.0	x16 slots for discrete graphics card (Slot 1	and 3). Supports the	Optional rear	1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter:				
	following graphics a			ports	4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt.				
	Graphics		lax Qty		Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor				
		2GB GDDR5 30W 3x miniDP 2GB GDDR5 40W 4x miniDP	2 2		Operating: 50 °F to 95 °F (10 °C to 35 °C)				
Discrete Graphics		4GB GDDR5 50W 4x miniDP	2	Temperature	Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)				
Offering		5GB GDDR5 75W 4x IIIIIIIDI	2		Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)				
		5GB GDDR5X 75W 4x DP	2						
	Quadro P4000	8GB GDDR5 105W 4x DP	1						
		6GB GDDR5X 180W DVI-D DL + 4x DP	1						
	Quadro RTX 4000	8GB GDDR6 160W 3x DP, 1x VirtualLink	1						
I .	Note: 24 Quadra P2000 (Quadra B4000 Quadra B5000 as Quadra BTV 4000 and	de 400M/ DCLI	I .					

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

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

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





ThinkStation P520 Platform Specifications - I of II

Dimensions 165mm/6.5" Wx 460mm/18.1" D x 440mm/17.3" H (with feet)	Form factor	33L Tower								
Processor	Dimensions	165mm/6.5" W x 460mm/18.1" D x 440mm/17.3" H (with feet)								
Processor Cores Threads Frequency Cache IUP Types	vveight	Maximum configu								
Xeon W-2295 18 36 3.0GHz 24.75MB 165W DPR4-2833 Xeon W-2275 14 28 3.3GHz 19.25MB 165W DPR4-2833 Xeon W-2265 12 24 3.3GHz 19.25MB 165W DPR4-2833 Xeon W-2265 10 20 3.7GHz 19.25MB 165W DPR4-2833 Xeon W-2265 10 20 3.7GHz 19.25MB 165W DPR4-2833 Xeon W-2245 8 16 3.9GHz 16.5MB 155W DPR4-2833 Xeon W-2245 8 16 3.9GHz 16.5MB 155W DPR4-2833 Xeon W-2233 4 8 4.1GHz 8.25MB 105W DPR4-2833 Xeon W-2223 4 8 4.1GHz 8.25MB 105W DPR4-2833 Xeon W-2223 4 8 3.6GHz 8.25MB 105W DPR4-2833 Xeon W-2123 4 8 3.6GHz 8.25MB 105W DPR4-2866 Xeon W-2175 14 28 2.5GHz 19MB 140W DPR4-2666 Xeon W-2175 10 20 3.3GHz 13.75MB 140W DPR4-2666 Xeon W-2145 8 16 3.7GHz 11MB 140W DPR4-2666 Xeon W-2133 6 12 3.6GHz 8.25MB 140W DPR4-2666 Xeon W-2133 6 12 3.6GHz 8.25MB 140W DPR4-2666 Xeon W-2133 6 12 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2123 4 8 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2123 4 8 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2123 4 8 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2123 4 8 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DPR4-2666 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DPR4-2666 Xeon W-2102 5 4 8 3.6GHz 8.25MB 120W DPR4-2666 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DPR4-2666 Xeon W-2103 6 10 10 10 10 10 10 10		Processor				-	Cache	TDP		
Xeon W-2275										
Xeon W-2256					3.0GI	17				
Xeon W-2245										
Xeon W-2245										
Neon W-2235										
Processor Support Xeon W-2223		Xeon W-2235	6	12	3.8GI	Ιz	8.25MB	130W	DDR4-2933	
Name										
Neon W-2195	Processor Support									
Xeon W-2155 10 20 3.3GHz 13.75MB 140W DDR4-2666 Xeon W-2145 8 16 3.7GHz 11MB 140W DDR4-2666 Xeon W-2135 6 12 3.7GHz 8.25MB 140W DDR4-2666 Xeon W-2133 6 12 3.6GHz 8.25MB 140W DDR4-2666 Xeon W-2125 4 8 4.0GHz 8.25MB 120W DDR4-2666 Xeon W-2123 4 8 3.6GHz 8.25MB 120W DDR4-2666 Xeon W-2104 4 4 3.2GHz 8.25MB 120W DDR4-2666 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DDR4-2666 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 5 4 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 4 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 4 4 4 2.9GHz 8.25MB 120W DDR4-2400 Xeon W-2102 4 4 4 4 4 4 4 4 4	Troccocor Capport									
						-				
Xeon W-2135										
Xeon W-2133										
Xeon W-2125										
Xeon W-2123										
Neon W-2104										
Veon W-2102										
Processor Sockets 1x FCLGA2066 Intel C422 Chipset Intel C422 Chi										
Chipset Intel C422 Chipset 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 4 channels 8 DIMM sockets with 5 SI2GB with 8 x 64GB DDR4-2933 RDIMMs 8 DIMM sockets with 5 SI2GB with 8 x 64GB DDR4-2933 RDIMMs 8 DIMM sockets with 5 SI2GB with 8 x 64GB DDR4-2933 RDIMMs 8 DIMM sockets with 5 SI2GB with 8 x 64GB DDR4-2933 RDIMMs 8 DIMM sockets with 6 DIMM sockets with	Processor Sockets		•				0.202		, , , , , , , , , , , , , , , , , , , ,	\exists
Memory Types			et							\exists
Memory Types				hannels						\dashv
Memory Capacity 512GB with 8 x 64GB DDR4-2933 RDIMMs	Memory Types				3 RDIMN	1				\exists
Storage Controller Storage										\dashv
Slot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x16, full height, half length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x16, full height, full length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x16, full height, full length, 25W, double-width PCI, full height, full length, 25W, open ended PCI, full height, full length, 25W, open ended PCI, full height, full length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, half length, 25W, open ended POI, full height, full length, 25W, open ended POI, full			14GD DI	J114-2300	ואוואוושוו	3				\dashv
Slot 2 (CPU) PCle 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCle 3.0 x4, full height, half length, 25W, open ended Slot 4 (CPU) PCle 3.0 x46, full height, full length, 75W, double-width Slot 5 PCl, full height, full length, 75W, double-width Slot 6 (PCH) PCle 3.0 x4, 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,	IVIETIOTY I TOLECTION		201- 0.0		- 1 - 1 - 4 - 4 - 11	1 41	0514/			\dashv
Slot 3 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x16, 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 PCI, full height, full length, 25W Open ended PCI, full height, half length, 25W, open ended PCI, full height, half									la.	
Slot 4 (CPU) PCle 3.0 x16, full height, full length, 75W, double-width Slot 5 PCl, full height, full length, 25W Slot 6 (PCH) PCle 3.0 x4, full height, half length, 25W, open ended										
Slot 4 (CPU) PCLe 3.0 x 16, full height, full length, 75W, double-Width Slot 5 PCI, full height, full length, 25W Slot 6 (PCH) PCle 3.0 x 4, full height, half length, 25W, open ended	Expansion slots	` '		,	0 /	_	· · ·			
Slot 6 (PCH) PCle 3.0 x4, full height, half length, 25W, open ended							th, 75W, doi	rpie-miat	n	
Graphics										
NVS 810		Slot 6 (PCH) F	Cle 3.0	x4, full h	eight, hal	f lengt	th, 25W, ope	n ended		
NVS 810		Graphics	N	1emory	Pow-	Co	nnector	SLI / N	IV- Max Qty	1
Quadro P400 2GB GDDR5 30W 3xminiDP 2		<u>'</u>			er			link		1 1
Quadro P600 2GB GDDR5 45W 4xminiDP 2										ļШ
Discrete Graphics Ouadro P620 2GB GDDR5 40W 4xminiDP 2 Quadro P1000 4GB GDDR5 50W 4xminiDP 2 Quadro P2000 5GB GDDR5 75W 4xDP 2 Quadro P4000 8GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5 120W DVI-D DL+4xDP SLI 2 Quadro P6000 24GB GDDR5 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 8000 48GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GV100 32GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP 1		Quadro P400								. II
Discrete Graphics Offering										1
Discrete Graphics Offering										- II
Quadro P4000 8GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5X180W 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 8000 48GB GDDR6 295W]4xDP, 1xVirtualLink 1 Quadro GV100 16GB HBM2 235W] 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP 1										1
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 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 1 Storage Controller Type	Discrete Graphics							_		1
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 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 1	Offering							SLI		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 1								JLI		1
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 255W 4xDP 1								(1 11
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 1										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 1 1										1
Quadro GP100									1	1
Storage Controller Type Interface RAID Cache			160	B HBM2	235W ¹	1xDVI-			nk 2]
Onboard Intel RSTe Std SATA 6Gb/s 0/1/10/5 9440-8i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 9460-16i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 9460-16i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 0/1/10/5 NVMe Basic Opt PCle NVMe 0/1/10 NVMe Premium Opt PCle NVMe 0/1/10/5		Quadro GV100	320	B HBM2	250W		4xDP		1]
Onboard Intel RSTe Std SATA 6Gb/s 0/1/10/5 9440-8i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 9460-16i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 9460-16i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 0/1/10/5 NVMe Basic Opt PCle NVMe 0/1/10 NVMe Premium Opt PCle NVMe 0/1/10/5		Storage Controll	er Type	e I	nterface		RAID		Cache	
Storage Controller 9440-81 PCIe						S	0/1/10/5			
Storage Controller		0440 9i PCIo	Ont	SAS 1	12Gb/s, S	SATA	0/1/10/5			
NVMe Basic Opt PCIe NVMe 0/1/10/5/6 4GB DDR4, Supercap NVMe Premium Opt PCIe NVMe 0/1/10 NVMe Premium Opt PCIe NVMe 0/1/10/5		9440-01 FCIE	Ор				0/1/10/5			_
NVMe Basic Opt PCIe NVMe 0/1/10 NVMe Premium Opt PCIe NVMe 0/1/10/5	Storage Controller	9460-16i PCIe	Ont	$_{t}$ SAS 1		SATA	0/1/10/5/6	4GB DI	DR4. SuperCar	, [[
NVMe Premium Opt PCIe NVMe 0/1/10/5								. 5.5 51	, caporoup	41
										$\parallel \parallel$
Transic for title 300 Obt Lote transic 0/1/10/2										-
		LANING IOI IIIIGI S	OD OP	(P	710 14 A 1A16		1 0/1/10/3			ᆀ

	D:-L-T	lata (DDI	0"- :	Marra					
	Disk Type 3.5" SATA	Interface SATA	RPM		Max Qty					
	HDD	6Gb/s	7.2K	1TB/2TB/4TB/6TB	6					
Storage Sup-	2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB/500GB FIPS	6					
port	2.5" SATA SSD	SATA 6Gb/s		256GB/512GB/1TB/2TB	6					
	M.2 PCIe SSI	INVIVIE		256GB/512GB/1TB/2TB	9					
	PCIe AIC SSI	PCIe NVMe		480GB	2 (1 when quad M.2 adapter used)					
	Bay Maximum Drives Qty									
Storage Bays	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure									
Max Storage	Supports up to 1x PCle AIC S All HDD: 36TB	9x M.2 SSE SD. using 6x 3.5	5" HDI	3.5" HDD/6x 2.5" SATA d D SATA SSD, 9x M.2 SSD, a						
Power supply		0W, autosen	sing, 🤉	92%, 80 PLUS Platinum o 92%, 80 PLUS Platinum o						
Media reader		card reader			S-II 15-in-1 USB 3.1 Gen 1					
Network interfaces	Integrated one ethernet or wir				ake-on-LAN. Optional PCIe					
WLAN + Bluetooth					11ac, Bluetooth 4.2, up to					
Security	Power-on and			Trusted Platform Module, access panel lock, Kensir	TCG 2.0 compliant, switch					
Intel vPro	Intel vPro tech	nology supp	orted.	vPro requires Wireless-A	C 8265 if Wi-Fi is needed					
Intel AMT	Intel Active Ma	nagement Te	echno	logy 11						
Diagnostic	Front panel wa with Lenovo P display on flex	C Diag-nosti	hinkS cs for	tation Diagnostics for Wir Android and iOS. Optiona	ndows. Photo-audio transfer al front 4-digit diagnostic					
	1 or 3-year lim	ited onsite se	ervice	with 9x5/NBD						
HD Audio	Realtek ALC6			44111						
Front ports	(3.5mm)			11W charging), 1x combo						
Rear ports	mic-in), 2x PS/	(USB 3.1 Ge 2	en 1, 1	Ix RJ-45, 3x analog audic	ports (line-in, line-out,					
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 3.1 Gen 1 port										

ThinkStation P520 Platform Specifications - II of II

	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)						
	Temperature - storage (no package) 14 °F to 140 °F (-10 °C to 60 °C)							
Environmental	Temperature - storage (with package)	emperature - storage (with package) -40 °F to 140 °F (-40 °C to 60 °C)						
specification	Altitude - operating	ltitude - operating (Unpressurized): -50ft-10000ft (-15.2m-3048m)						
	Humidity - operating 10%~80%, non-condensing							
	Humidity - storage (with package)	Humidity - storage (with package) 10%~90%, non-condensing						
Environmental Certifications	RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BE0008US and 30BE0009US							
ISV certifications	Please visit <u>www.thinkworkstations.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 P520c Platform Specifications

Form factor	25L Tower									
Dimensions		I x 426n	m/16 77	" D x 376	mm/14 8" l	I (with f	et)			
Weight	175mm/6.89" W x 426mm/16.77" D x 376mm/14.8" H (with feet) Maximum configuration: 31.97 lb (14.5kg)									
		# of	# of	Base	9 -			Mo	emory	
	Processor		Threads			che	TDP		ypes	
	Xeon W-2245	8	16	3.9GI		5MB	155W		R4-2933	
	Xeon W-2235	6	12	3.8GI		5MB	130W		34-2933	
	Xeon W-2225	4	8	4.1GI		5MB	105W		R4-2933	
	Xeon W-2223	4	8	3.6GI		5MB	120W		34-2666	
	Xeon W-2195	18	36	2.3GI	-lz 24.7	75MB	140W	DDF	34-2666	
Processor Support	Xeon W-2175	14	28	2.5GI		MB	140W	DDF	R4-2666	
riocessoi Support	Xeon W-2155	10	20	3.3GI	-lz 13.7	75MB	140W	DDF	R4-2666	
	Xeon W-2145	8	16	3.7GI		MB	140W	DDF	R4-2666	
	Xeon W-2135	6	12	3.7GI		5MB	140W	DDF	R4-2666	
	Xeon W-2133	6	12	3.6GI	Hz 8.2	5MB	140W	DDF	R4-2666	
	Xeon W-2125	4	8	4.0GI		5MB	120W		R4-2666	
	Xeon W-2123	4	8	3.6GI	-lz 8.2	5MB	120W		R4-2666	
	Xeon W-2104	4	4	3.2GI		5MB	120W		R4-2400	
	Xeon W-2102	4	4	2.9GI	Hz 8.2	5MB	120W	DDF	R4-2400	
Processor Sockets	1x FCLGA2066	i								
Chipset	Intel C422 Chip	set								
Memory Sockets	4 DIMM socket	s with 4	channels	;						
Memory Types	DDR4-2666 RD				1M					
Memory Capacity	256GB with 4 x			300 110111						
Memory Protection		04001	IDIIVIIVIS							
Memory Frotection		DOI: 0	0 4 0 . 6 .	II la adalah A	(. II I I	75141				
	Slot 1 (CPU)				full length,					
Expansion slots	Slot 2 (CPU)				ıll length, 2		n ende	d		
Expansion siots	Slot 3 (CPU)	PCIe 3.	0 x16, fu	II height, 1	full length,	75W				
	Slot 4 (PCH)	PCIe 3.	0 x4, full	height, ha	alf length, 2	25W, ope	en ende	ed		
	Graphics		Memory	Power	Conn	ector	SLL	/ NV-	Max Qty	
	Grapinos		violilory	1 01101	001111	00101		nk	max diy	
	NVS 810	40	3B DDR3	68W	8xmir	ni DP				
	Quadro P400		B GDDR						1	
Diagramata Orandaiaa				5 30W	3xmi				<u>1</u> 2	
	Quadro P600	2G				niDP			2	
	Quadro P600 Quadro P620		B GDDR	5 45W	3xmi 4xmi 4x mi	niDP niDP			2	
	Quadro P620	2G	B GDDR B GDDR	5 45W 5 40W	4xmi 4x mi	niDP niDP niDP			2 2 2	
	Quadro P620 Quadro P1000	2G 4G	B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W	4xmi	niDP niDP niDP niDP			2	
	Quadro P620 Quadro P1000 Quadro P2000	2G 4G 5G	B GDDR B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W 5 75W	4xmi 4x mi 4xmi 4xI	niDP niDP niDP niDP OP			2 2 2 2	
	Quadro P620 Quadro P1000	2G 4G 5G 8G	B GDDR B GDDR B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W 5 75W	4xmi 4x mi 4xmi 4xI 4xI	niDP niDP niDP niDP DP			2 2 2 2 2 2	
	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000	2G 4G 5G 8G 16G	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W	4xmi 4x mi 4xmi 4xI 4xI DVI-D D	niDP niDP niDP niDP DP DP L+4xDP			2 2 2 2 2 2 2	
	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 40	2G 4G 5G 8G 16G 000 8G	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W	4xmi 4x mi 4xmi 4xI 4xI DVI-D D	niDP niDP niDP niDP DP DP L+4xDP	ık	ID	2 2 2 2 2 2 2 1	
	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 40 Storage Contro	2G 4G 5G 8G 16G 000 8G	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W	4xmi 4x mi 4xmi 4xmi 4xI 0 VI-D D 0 SXDP, 1xV Interface	niDP niDP niDP niDP DP DP L+4xDP	k RA	AID 10/5	2 2 2 2 2 2 2 2	
Offering	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I	2G 4G 5G 8G 16G 000 8G	B GDDR B GDDR B GDDR B GDDR B GDDR Type	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W	4xmi 4x mi 4xmi 4xl 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s	niDP niDP niDP niDP DP DP L+4xDP 'irtualLir	RA 0/1/	10/5	2 2 2 2 2 2 2 1 1 1 Cache	
Offering	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 44 Storage Contro Onboard Intel I 9440-8i PCle	2G 4G 5G 8G 16G 000 8G	B GDDR B GDDR B GDDR B GDDR B GDDR Type Std Opt	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W	4xmi 4x mi 4xmi 4xli 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s Gb/s, SATA	niDP niDP niDP niDP DP DP L+4xDP 'irtualLir	0/1/ 0/1/	10/5 10/5	2 2 2 2 2 2 2 1	
Offering	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I 9440-8i PCle NVMe Basic	2G 4G 5G 8G 16G 000 8G	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR CONTROL B GDDR B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W SAS 120	4xmi 4x mi 4xli 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s Gb/s, SATA Cle NVMe	niDP niDP niDP niDP DP DP L+4xDP 'irtualLir	0/1/ 0/1/ 0/1/ 0/1	10/5 10/5 /10	2 2 2 2 2 2 2 1 1 1 Cache	
Offering	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I 9440-8i PCle NVMe Basic NVMe for Intel	2G 4G 5G 8G 16G 000 8G oller RSTe	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR CONTROL B GDDR B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR CONTROL B GDDR B GDDR CONTROL B GDDR B GDR B GR B GDR B GR B GR B GR B GR B GR B GR B GR B G	5 45W 5 40W 5 50W 5 50W 5 120W 5X 180W 6 160W SAS 120 P	4xmi 4x mi 4xmi 4xl 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s Bb/s, SATA Cle NVMe Cle NVMe	niDP niDP niDP niDP DP DP L+4xDP irtualLir	0/1/ 0/1/ 0/1/ 0/1	10/5 10/5 /10 10/5	2 2 2 2 2 2 1 1 1 Cache	
Offering	Quadro P620 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro RTX 4' Storage Contro Onboard Intel I 9440-8i PCle NVMe Basic NVMe for Intel Disk Type	2G 4G 5G 8G 16G 000 8G 001ler RSTe	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR COPE Std Opt Opt Opt Interface	5 45W 5 40W 5 50W 5 50W 5 75W 5 120W 5 X 180W 6 160W SAS 120 P	4xmi 4x mi 4xmi 4xmi 4xli 4xli DVI-D D 3xDP, 1xV Interface ATA 6Gb/s GD/s, SATA Cle NVMe Off	niDP niDP niDP niDP DP DP L+4xDP rirtualLir	RA 0/1/ 0/1/ 0/1/ 0/1 0/1/	10/5 10/5 /10 10/5	2 2 2 2 2 2 1 1 1 Cache	
Offering Storage Controller	Quadro P620 Quadro P1000 Quadro P2000 Quadro P5000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I 9440-8i PCIe NVMe Basic NVMe for Intel Disk Type 3.5" SATA HDE	2G 4G 5G 8G 16G 1000 8G 8STe SSD SSD	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR I Type Opt Opt Opt Interface ATA 6Gb	5 45W 5 40W 5 50W 5 75W 5 120W 5X 180W 6 160W SAS 120 P P P	4xmi 4x mi 4xmi 4xmi 4xl 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s, SATA Cle NVMe Cle NVMe Off 1TB/2TE	niDP niDP niDP niDP DP DP L+4xDP irtualLir 6Gb/s	RA 0/1/ 0/1/ 0/1/ 0/1 0/1/	10/5 10/5 /10 10/5	2 2 2 2 2 2 1 1 1 Cache	
	Quadro P620 Quadro P1000 Quadro P2000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I 9440-8i PCIe NVMe Basic NVMe for Intel Disk Type 3.5" SATA HDE 2.5" SATA HDE	2G 4G 5G 8G 16G 000 8G 000 8G SSD	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR CONTROL B GDDR B GDDR CONTROL B GDDR CO	5 45W 5 40W 5 50W 5 75W 5 120W 5 120W 6 160W S SAS 120 P P RPM /s 7.2K	4xmi 4x mi 4xmi 4xli DVI-D D 3xDP, 1xV Interface ATA 6Gb/s Gb/s, SATA Cle NVMe Cle NVMe 1TB/2TE 500GB/56	niDP niDP niDP niDP DP DP L+4xDP 'irtualLir 6Gb/s ering 3/4TB/61	RA 0/1/ 0/1/ 0/1/ 0/1/ 0/1/	10/5 10/5 /10 10/5	2 2 2 2 2 2 2 1 1 1 Cache - - - - - ax Qty 4	
	Quadro P620 Quadro P1000 Quadro P2000 Quadro P5000 Quadro P5000 Quadro RTX 40 Storage Contro Onboard Intel I 9440-8i PCIe NVMe Basic NVMe for Intel Disk Type 3.5" SATA HDE	2G 4G 5G 8G 8G 8G 8G 8G 8G 8	B GDDR B GDDR B GDDR B GDDR B GDDR B GDDR Copt Copt Copt Copt Copt Copt Copt Copt	5 45W 5 40W 5 50W 5 75W 5 120W 5 120W 6 160W SAS 120 P P P RPM /s 7.2K /s 7.2K	4xmi 4x mi 4xmi 4xmi 4xl 4xl DVI-D D 3xDP, 1xV Interface ATA 6Gb/s, SATA Cle NVMe Cle NVMe Off 1TB/2TE	niDP niDP niDP niDP DP DP L+4xDP 'irtualLir 6Gb/s ering 8/4TB/67 00GB F1 GB/1TE	RA 0/1/ 0/1/ 0/1/ 0/1/ 0/1/ FB PS	10/5 10/5 /10 10/5	2 2 2 2 2 2 1 1 1 Cache	

Supports up to 5x M.2 SSD + 4x 3.5" HDD/4x 2.5" SSD/4x 2.5" HDD All HDD: 24TB using 4x 2.5" SATA SSD and 5x M.2 SSD Power supply Media reader Network Interfaces Netw									
All SSD: 18TB using 4x 2.5" SATA SSD and 5x M.2 SSD One fixed 500W, autosensing, 92%, 80 PLUS Platinum qualified Wedia reader Network Interfaces Network Interfaces Network Interfaces Network Interfaces Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/3GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEF1 setting. Optional access panel lock, Kensington lock, and pad lock Intel vPro and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEF1 setting. Optional access panel lock, Kensington lock, and pad lock Intel vPro technology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed Intel AMT Intel Active Management Technology 11 Diagnostic Base warranty HD Audio Realek ALC662 codec Front ports Rear ports Rear ports Rear ports Rear ports Rear ports Rear ports Rear ports Optional ports TrinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module Realek ALC662 codec Front ports Rear ports Rear ports TrinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module Realek ALC662 codec Front ports Rear ports Rear ports TrinkStation Diagnostics for Windows. Optional gaudio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front: 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm) 2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front: 2x TSB Type-C on flex module, USB 3.1 Gen 1 Rear: 1x COM port 1x SATA on flex module 2x USB 3.1 Gen 1 port Temperature - storage (with pack- age) Temperature - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remover - storage (with pack- age) Remo	Max Storage		5" HDD/4x 2.5" SSD/4x 2.5" HDD						
Media reader Network Integrate on fines module Network Integrate on files module Integrate on files module PCIe ethernet or wireless adapters are available Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting, Optional access panel lock, Kensington lock, and pad lock Intel vPro late Intel vPro lecknology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed Intel AMT Intel Active Management Technology 11 ThinkStation Diagnostics ThinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on less ewarranty 1 or 3-year limited onsite service with 9x5/NBD Realtek ALC662 codec Pront ports 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm) 2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports wideo-out 1x eSAT on flex module, one of two ports supports wideo-out 1x USB Type-C on flex module, one of two ports supports wideo-out 1x USB Type-C on flex module, one of two ports supports wideo-out 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 3.1 Gen 1 port Temperature - storage (with package) 14 °F to 140 °F (-40 °C to 60 °C) Temperature - storage (with package) 14 °F to 140 °F (-40 °C to 60 °C) Temperature - storage (with package) 10%-90%, non-condensing Humidity - operating Humidity - operating 10%-90%, non-condensing Humidity - operating 10%-90%, non-condensing Pumidity - operating 10%-90%, non-condensing 10%-90%,	- Nax Otorago		SSD and 5x M.2 SSD						
I reader on flex module Integrated one gigabit ethernet (Intel i219LM), supports Wake-on-LAN. Optional PCIe ethernet or wireless adapters are available WLAN + Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps Security features Intel AMT Security features Secur	Power supply								
interfaces PClē ethernet of wireless adapters are available VLAN + Optional Intel Wireless-AC 8265, zx2, 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 1.2 via UEFI setting. Optional access panel lock, Kensington lock, and pad lock Intel vPro technology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed Intel AMT Intel Active Management Technology 11 Diagnostic Intel Active Management Technology 11 Diagnostic Intel AMT Intel Active Management Technology 11 Diagnostic Base warranty Intervention of the module Intel AMT Intel Active Management Technology 11 Diagnostic Part Management Technology 11 Diagnostic Intel Amt Intel Active Management Technology 11 Diagnostic Intel Amt Intel Active Management Technology 11 Diagnostic Part Management Technology 11 Diagnostic Intel Amt Intel Active Management Technology 11 Diagnostic Intel Amt Intel Active Management Technology 11 Diagnostic Part Management Technology 11 Diagnostic Intel Amt Intel Active Management Technology 11 Diagnostic Part Management Technology 11 Diagnostic Management Techn	Media reader								
WLAN + Dptional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 887Mbps Security features Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEF1 setting. Optional access panel lock, Kensington lock, and pad lock enhology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed intel AMT Intel Active Management Technology 11 ThinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module Realtek ALC662 codec Front ports 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm) 2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front:									
Security features Switch to 1.2 via UEFI setting. Optional access 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 ThinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module Base warranty 1 or 3-year limited onsite service with 9x5/NBD HD Audio Realtek ALC662 codec Front ports 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm) 2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front:									
Intel AMT Diagnostic Intel Active Management Technology 11 ThinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module Base warranty HD Audio Realtek ALC662 codec Front ports Rear ports Rear ports Rear ports Rear ports Supports the following optional ports: Front: • 2x USB 2.0, 4x USB 3.1 Gen 1, 1x 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 ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W internal: • 1x internal USB 3.1 Gen 1 port Temperature - operating Environmental specification Environmental Specification Environmental Certifications Environmental Certifications Environmental Certifications Rear (Unpressurized): -50ft-10000ft (-15.2m-3048m) Humidity - operating	Security features	switch to 1.2 via UEFI setting. Optional access panel lock, Kensington lock, and pad lock							
Diagnostic Base warranty HD Audio Realtek ALC662 codec Front ports Rear ports Rear ports Notice of the module Notice of the code of the	Intel vPro		Pro requires Wireless-AC 8265 if Wi-Fi is						
flex module Base warranty HD Audio Realtek ALC662 codec Front ports Rear port	Intel AMT								
HD Audio Realtek ALC662 codec Front ports 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm)	Diagnostic	flex module							
Front ports 2x USB 3.1 Gen 1, microphone (3.5mm), headphone (3.5mm) 2x USB 2.0, 4x USB 3.1 Gen 1, 1x 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 3.1 Gen 1 port Temperature - operating Temperature - storage (no package) Altitude - operating Altitude - operating Environmental specification Environmental Certifications Environmental Certifications RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BX0008US and 30BX0009US Storage Bays Storage Bays Storage Bays Storage Bays Flex Bay 1x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, nic Rear, 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, microl, 1x RJ-45, 3x analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, microl, 2x Analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audio ports (line-in, line-out, analog audi		-	ith 9x5/NBD						
Rear ports 2x USB 2.0, 4x USB 3.1 Gen 1, 1x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2 Supports the following optional ports: Front:	1		Tanan) haadahaa (O.Tara)						
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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 3.1 Gen 1 port Temperature - operating Temperature - storage (no package) Itemperature - storage (no package) Altitude - operating Humidity - operating Environmental specifications Environmental Certifications Environmental Certifications RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BX0008US and 30BX0009US Bay Maximum Drives Qty Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x 5.25° 9.0mm optical drives 2 x 5.25° 9.0mm optical drives 1 x flex module for the following options: Tray 1: 9.0mm optical drives 1 x flex module for the following options: Tray 2: 15-in-1 USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures	Rear ports	mic-in), 2x PS/2							
Environmental specification Environmental specification Environmental specification Altitude - operating	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 3.1 Gen 1 port							
Environmental specification Environmental specification Altitude - operating (Unpressurized): -50ft-10000ft (-15.2m-3048m) Humidity - operating 10%~80%, non-condensing Humidity - storage (with package) 10%~90%, non-condensing Environmental Certifications Environmental Certifications RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BX0008US and 30BX0009US ISV certifications Bay Maximum Drives Qty Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drives 1 x 5.25" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures		<u> </u>	, ,						
Environmental specification Altitude - operating			14 1 10 140 1 (-10 10 10 10 10 10						
Specification Altitude - operating	Environmental		-40 °F to 140 °F (-40 °C to 60 °C)						
Humidity - operating		,							
Environmental Certifications RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BX0008US and 30BX0009US Rot 30BX0009US Please visit www.thinkworkstations.com/isv-certifications/ Bay Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCIe to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drives 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures	-								
Certifications Qualified on model 30BX0008US and 30BX0009US Please visit www.thinkworkstations.com/isv-certifications/ Bay		Humidity - storage (with package)	10%~90%, non-condensing						
Bay Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 thalf-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures									
Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures	ISV certifications	Please visit www.thinkworkstations	.com/isv-certifications/						
M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure Flex Bay 1 x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit diagnostic display Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures			Maximum Drives Qty						
Disk bay Up to 2x 3.5"/2.5" disks with 2 disk bays	Storage Bays	Type M.2 slot 5x M.2 SSD (2 onboard, 3 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1 x flex module for the following options: 1 Tray 1: 9.0mm optical 1 Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt, or 4-digit d nostic display 1 Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA 2 x M.2 SSD with 2x Front Removable Drive Enclosures							
		INSK Day IND TO 2X 3.5"/2.5" disks w	it⊓ ∠ disk days						

Note:

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

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













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

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

ThinkStation P720 Platform Specifications

36L Tower

Form factor

- i i i actor	36L Tower									
Dimensions	175mm/6.89" W x 485mm/19.1" D x 446mm/17.6" H (with feet)									
Weight	Maximum configuration: 52.25 lb (23.7kg)									
Processor Sockets										
Processor Support	Up to two 165 W Ger ver, Gold, or Platinun		en 2 Intel	Xeon Scala	able family	processo	ors, Bronze, Si			
	Processor	# of Cores	# of Threads	Base Frequency	Cache	TDP	Memory Type			
	Xeon Gold 6246	12	24		24.75MB	165W	DDR4-2933			
	Xeon Gold 6244	8	16	3.6GHz	25MB	150W	DDR4-2933			
	Xeon Gold 6242	16	32	2.8GHz	22MB	150W	DDR4-2933			
	Xeon Gold 6238T Xeon Gold 6234	22	44	1.9GHz	30MB	125W	DDR4-2933			
	Xeon Gold 6230	20	16 40	3.3GHz 2.1GHz	25MB 28MB	130W 125W	DDR4-2933 DDR4-2933			
	Xeon Gold 6226	12	24	2.7GHz	19MB	125W	DDR4-2933			
	Xeon Gold 5222	4	8	3.8GHz	16.5MB	105W	DDR4-2933			
	Xeon Gold 5218	16	32	2.3GHz	22MB	125W	DDR4-2666			
	Xeon Gold 5217	8	16	3.0GHz	11MB	115W	DDR4-2666			
	Xeon Gold 5215	10	20	2.5GHz	13.75MB	85W	DDR4-2666			
	Xeon Silver 4216	16	32	2.1GHz	22MB	100W	DDR4-2400			
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W	DDR4-2400			
	Xeon Silver 4214 Xeon Silver 4210	12	24 20	2.2GHz 2.2GHz	17MB 14MB	85W 85W	DDR4-2400 DDR4-2400			
	Xeon Silver 4209T	10 8	16	2.2GHz	11MB	70W	DDR4-2400			
Processor Offering	Xeon Silver 4208	8	16	2.1GHz	11MB	85W	DDR4-2400			
	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W	DDR4-2133			
	Xeon Platinum 8160		48	2.1GHz	33MB	150W	DDR4-2666			
	Xeon Gold 6146	12	24	3.2GHz	24.75MB	165W	DDR4-2666			
	Xeon Gold 6142	16	32	2.6GHz	22MB	150W	DDR4-2666			
	Xeon Gold 6136	12	24	3.0GHz	24.75MB	150W	DDR4-2666			
	Xeon Gold 6134	8	16	3.2GHz	24.75MB	130W	DDR4-2666			
	Xeon Gold 6128	6	12	3.4GHz	19.25MB	115W	DDR4-2666			
	Xeon Gold 5122 Xeon Gold 5120T	14	28	3.6GHz 2.2GHz	16.5MB	105W 105W	DDR4-2666 DDR4-2400			
	Xeon Gold 5118	12	24	2.3GHz	19.25MB 16.5MB	105W	DDR4-2400			
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400			
	Xeon Silver 4116	12	24	2.1GHz	16.5MB	85W	DDR4-2400			
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-2400			
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-2400			
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-2400			
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-2400			
	Xeon Silver 4109T Xeon Silver 4108	8	16 16	2.0GHz	11MB	70W	DDR4-2400			
Chinaat		0	10	1.8GHz	11MB	85W	DDR4-2400			
Chipset	Intel C621 Chipset	h 10 obo	nnolo 6	DIMM sook	oto with 6	ohonnolo	nor progonous			
Memory Sockets	12 DIMM sockets wit	11 12 0118	illieis. o	DIIVIIVI SOCK	els willi o	Charmeis	per processor			
Memory Types Memory Capacity	DDR4-2666 RDIMM 768GB (DDR4-2933	DDIMM	or 2010	P (DDD4 0	SEE DOIM	11.41				
Memory Protection		(ואוואווטח	01 3040	שני (טטח4-2	ואוועה ססס.	livi)				
Memory Protection										
				ht, full leng						
				ht, full leng						
Expansion slots				nt, full length						
Expansion dioto				ght, full leng	th, 75W, d	ouble-wid	th			
				ngth, 25W						
		3.0 x4,	full heigh	nt, half lengt	h, 25W, op					
	Graphics	Memo			nnector	SLI /				
	NIVO 040	40D DI		er	maini DD	NVlink				
	NVS 810 Quadro P400	4GB DI			mini DP		3			
		<u>2GB GD</u> 2GB GD			<u>miniDP</u> miniDP		3			
Discrete Graphics		2GB GD			miniDP		3			
Offering		4GB GD			miniDP		3			
		5GB GD			4xDP		3			
	Quadro P4000	8GB GD	DR5 12	20W 4	4xDP		2			
	Quadro P5000 1	6GB GD	DR5X 18	30W DVI-D	DL+4xDF	SLI	2			
			DR5X 25		DL+4xDF		1 1			

	Graphics		Memory			Pow-	C	onnecto	r	SLI /	Max
	Quadro RTX 400	3 00	3GB	GE	DDR6	er 160W	3xDP,	1xVirtu	alLin	NVIink k	Qty 2
Discrete Graphics	Quadro RTX 500	00 1	6GI	3 G	DDR6	265W	4xDP,	1xVirtu	<u>alLin</u>	k	1
Offering	Quadro RTX 600							1xVirtu			1
	Quadro RTX 800	00 4	8GL	3 G	DDR6	295W	4xDP,	1xVirtu	<u>alLin</u>	K	1
	Quadro GP100 Quadro GV100		16G	IR F	IBM2	235W	ואטאו	-D DL,	4xDF	,	1
		_				250W	_	4xDP			
	Storage Control	ler ly	/pe		Inter	ace	Н	AID		Cach	ie
	Onboard Intel RSTe	S	Std		SATA (0/1/10/5				
0	9440-8i PCIe	С	pt		SATA 6		0/1	/10/5			
Storage Controller	9460-161 PCIE		pt		SATA 6			10/5/6	4GI	B DDR4,	SuperCap
	NVMe Basic)pt			<u>IVMe</u>		1/10			
	NVMe Premium	(Opt	ŀ	PCIe N	vvMe	0/1	/10/5			
	NVMe for Intel SSD	C	pt	F	PCIe N	NVMe	0/1	/10/5			
	Disk Type	Inte	erfac	e	RPM		Offer	ing		Max	(Qty
	7,1							3		(Blind co	onnection Oused)
											supports
Storage Support	3.5" SATA HDD	CATA	TA 60b/o 7 0K			1TD	/OTD/	TD/6TE	,	` addi	tional
	3.5 SAIA HUU	SAIA	IA 0GD/5 / .ZR		1TB/2TB/4TB/6TB			1	4x 2.5" SATA		
	0 4 11	0.4=4							SSD/HDD)		
	2.5" SATA HDD					500GB/500GB FIPS 300GB/600GB		S		0	
2	2.5" SAS HDD 3								TD		8 0
	2.5" SATA SSD 2.5" PCIe SSD					230GB	1.5T	B/1TB/2	210		2
	M.2 PCIe SSD					256GB		<u>Б</u> В/1ТВ/2	TR		<u>2</u> 9
	PCIe AIC SSD	PCle	NV	Me		200GL	4800		-10		2
	Bay Maximum Drives Qty										
	Type										
	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCIe to M.2 adapter)										
	2 flex bays. Supports the following:										
	2x half-height optical drives 3x 5 25 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0										
	 2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 1x 3.5"/2.5" SATA SSD/HDD 										
	1 V 2 5"/2 5" SATA SSD/HDD with Front Access Storage Enclosure										
	Flex Bay 1x 3.5 /2.5 SATA SSD/HDD with Front Access Storage Enclosure 1x flex module for the following options:										
	Tray 1: 9.0mm optical										
Storage Bays	Tray 2: 15-in-1 USB 3.1 Gen 1 reader or 2x Thunderbolt										
	Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA										
								e Drive			
						lard, 2 l	oays o	otional).	Sup	ports one	of the fol-
	lowing • 4x 3.5	COUL	gura Ta i	ALIOI ALDE	15.						
						25" SA	ATA SS	מחא/ם:	(Blir	nd connec	tion
	Disk bay edec) (c		וטנ	7 1 47	2.0 0,	1171 00	,0,1100	(DIII	10 00111100	11011
	• 8x 2.5	5" SA	TA S	SSE	/HDD	or 8x 2	2.5" SA	S HDD	(Blir	nd connec	tion
	needed	d) (k									
										nection ne	
	Supports up to 9	x M.2	2 SS	SD -	+ 6x 3	.5" HDI	D/10x 2	2.5" SSI	D/10:	x 2.5" HDI	D + 2x
Max Storage	PCIe AIC SSD.			"							
	All HDD: 36TB u					ATA CC	.D 0	M 0 001	D 0:-	4 0v DOI-	AIC CCD
	All SSD: 38.96TI	o usii	ng 1	UX	∠.5″ S	AIA SS	ט, און, 9	vi.2 551	ر, an	iu 2x PCI6	AIC SSD

ThinkStation P720 Platform Specifications

Power supply	Supports one of the following: One fixed 690W, autosensing, 92%, 80 PLUS Platinum qualified One fixed 900W, autosensing, 92%, 80 PLUS Platinum qualified
Media reader	USB 2.0 9-in-1 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1 reader on flex module
Network interfaces	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN on both two ports. Optional PCIe ethernet are available
WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Chassis intrusion switch. Optional access panel 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. ThinkSta-tion 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 3.1 Gen 1 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)
Rear ports	2x USB 2.0, 4x USB 3.1 Gen 1, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x PS/2
Optional ports	Supports the following optional ports: Front: • 2x Thunderbolt ports (USB Type-C) 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 3.1 Gen 1 port
Environmental specification	Temperature - operating 50 °F to 95 °F (10 °C to 35 °C) Temperature - storage (no package) 14 °F to 140 °F (-10 °C to 60 °C) Temperature - storage (with package) -40 °F to 140 °F (-40 °C to 60 °C) Altitude - operating (Unpressurized): 0-10000ft (0-3048m) Humidity - operating 10%~80%, non-condensing Humidity - storage (with package) 10%~90%, non-condensing
Environmental Certifications	RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BA0007US and 30BA0008US
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/
Noto:	

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

55L Tower

Form factor

i oiiii iactoi	SSE TOWER								Graphics	IVIE
Dimensions	200mm/7.87" W x 620i	mm/24.4	" D x 446	3mm/17.56"	H (with feet)				
Weight	Maximum configuration	n: 71.3 lb	(32.3kg)						4GB
Processor Sockets	2x FCLGA3647							1		2GB
	Up to two 205 W Gen	1 or Gen	2 Intel X	con Scalable	e family pro	cessors.	Bronze, Sil-			2GB
Processor Support	ver, Gold, or Platinum					,				2GB
		# of	# of	Base			Memory			4GB
	Processor	Cores	Threads	Frequency	Cache	TDP	Types	Discrete Graphics		5GB
	Xeon Platinum 8280	28	56	2.7GHz	39MB	205W	DDR4-2933	Offering	Quadro P4000	8GB
	Xeon Gold 6254	18	36	3.1GHz	25MB	200W	DDR4-2933			16GB
	Xeon Gold 6244	8	16	3.6GHz	25MB	150W	DDR4-2933			24GB
	Xeon Gold 6242	16	32	2.8GHz	22MB	150W	DDR4-2933		Quadro RTX 400	00 8GB
	Xeon Gold 6238T	22	44	1.9GHz	30MB	125W				
	Xeon Gold 6234	8	16	3.3GHz	25MB	130W				
	Xeon Gold 6230	20	40	2.1GHz	28MB	125W				
	Xeon Gold 6226	12	24	2.7GHz	19MB	125W				16GE
	Xeon Gold 5222	4	8	3.8GHz	16.5MB	105W				32GE
	Xeon Gold 5218	16	32	2.3GHz	22MB	125W				
	Xeon Gold 5217	8	16	3.0GHz	11MB	115W				
	Xeon Gold 5215	10	20	2.5GHz	13.75MB	85W			9440-8i PCle	Opt
	Xeon Silver 4216	16	32	2.1GHz	22MB	100W			9460-16i PCIe	Opt
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W		Controller		
	Xeon Silver 4214	12	24	2.2GHz	17MB	85W				Opt
	Xeon Silver 4210	10	20	2.2GHz	14MB	85W				
Dua	Xeon Silver 4209T	8	16	2.2GHz	11MB	70W			NVMe for Intel S	SSD Opt
Processor Offering	Xeon Silver 4208	8	16	2.1GHz	11MB	85W			Disk Type II	nterface RF
	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W			2.0.K 1, po	
	Xeon Platinum 8160T	24	48	2.1GHz	33MB	150W			3.5" SATA	SATA -
	Xeon Gold 6154	18	36	3.0GHz	24.75MB	200W			HDD	
	Xeon Gold 6142	16	32	2.6GHz	22MB	150W	DDR4-2666		2.5" SATA	CATA
	Xeon Gold 6136	12	24	3.0GHz	24.75MB	150W	DDR4-2666		HDD	6Gb/s 7.5
	Xeon Gold 6134	8	16	3.2GHz	24.75MB	130W	DDR4-2666		0 5" 0 4 0 1 100	SAS 10
	Xeon Gold 6128	6	12	3.4GHz	19.25MB	115W	DDR4-2666	Storage Support	I I	12Gb/s
	Xeon Gold 5122	4	8	3.6GHz	16.5MB	105W	DDR4-2666	Storage Support	2.5" SATA	SATA
	Xeon Gold 5120T	14	28	2.2GHz	19.25MB	105W	DDR4-2400		SSD	6Gb/s
	Xeon Gold 5118	12	24	2.3GHz	16.5MB	105W	DDR4-2400		2 5" DCIA SSD	PCIe
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400		2.5 FOIE 33D	
	Xeon Silver 4116	12	24	2.1GHz	16.5MB	85W	DDR4-2400		M 2 PCIa SSD	PCIe
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-2400		Quadro P4000 Quadro P5000 Quadro P5000 Quadro RTX 400 Quadro RTX 500 Quadro RTX 600 Quadro RTX 800 Quadro RTX 800 Quadro GP100 Quadro RTX 800 Quadro RTX	
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-2400		PCIA AIC SSD	
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-2400		Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P5000 Quadro P6000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro RTX 4000 Quadro RTX 4000 Quadro RTX 6000 Quadro RTX 8000 Quadro RTX 8000 Quadro RTX 8000 Quadro GV100 Storage Controller Onboard Intel RST6 9440-8i PCIe 9460-16i PCIe NVMe Basic NVMe Premium NVMe for Intel SSE NVMe Premium NVMe for Intel SSE Disk Type Inte 3.5" SATA SA HDD GO 2.5" SATA SA HDD GO 2.5" SATA SA HDD GO 2.5" SATA SA HDD GO 2.5" SATA SA HDD GO 2.5" SATA SA HDD GO SATA SA SA SA SA SA SA	NVMe
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-2400		Bay	
	Xeon Silver 4109T	8	16	2.0GHz	11MB	70W	DDR4-2400		Type	
	Xeon Silver 4108	8	16	1.8GHz	11MB	85W	DDR4-2400		M.2 slot 9x M.2	SSD (2 on
Chipset	Intel C621 Chipset								2x 3.5"	or 2.5" dis
	16 DIMM sockets with	12 chan	nels. 8 D	IMM sockets	with 6 cha	nnels pe	r processor		• 3x ha	alf-height o
	DDR4-2666 RDIMM, D						. р. с с с с с с .		• 2x 5.	.25" 9.0mm
, ,,							SEE DDIMM)		• 1x 5.	.25" 9.0mm
		TIVIIVI OI I	JDN4-28	33 HUIIVIIVI)	0131200 (DDN4-20	ואוואוועם ססט		a 1v3	
wemory Protection	ECC							Storago Baye	riex bay 1x fle	ex module f
	Slot 1 (CPU1) PCIe 3 Slot 2 (CPU1) PCIe 3 Slot 3 (CPU1) PCIe 3 Slot 4 (CPU1) PCIe 3	3.0 x16, t	ull heigh	t, full length,	75W, doub	le-width		Sidiage bays	Tray	1: 9.0mm d
	Slot 2 (CPUT) PCIe 3	5.0 X4, IU	II neignt,	Tull length, 2	5vv, open e	enaea Io width				
	Slot 4 (CPLI1) PCIe 3	0.0 x 10, 1 3 0 x 4 fii	uii rieigii Il heiaht	i, iuii ierigiii, full lenath 2	5W open e	nded	DDR4-2933 DW DDR4-2933 DW DDR4-2933 DW DDR4-2933 DW DDR4-2666 DW DDR4-2666 DW DDR4-2400 DW DDR4-2400 DW DDR4-2666 DW DDR4-2660 DW DDR4-2400 DR4-2400 W DDR4-2400 DR4-2400			
Chipset Memory Sockets Memory Types Memory Capacity Memory Protection I	Slot 5 (PCH) PCIe 3	0.0 x4, 10 0 x4 fu	II height	half length	25W open	ended				
	Slot 6 (CPU2) PCIe 3	3.0 x16. f	ull heigh	t. half length.	75W	onaoa				
	Slot 5 (PCH) PCIe 3 Slot 6 (CPU2) PCIe 3 Slot 7 (CPU2) PCIe 3 Slot 8 (CPU2) PCIe 3	3.0 x16, f	ull heigh	t, full length,	75W, doub	le-width			one of	the followin
	Slot 8 (CPU2) PCIe 3	3.0 x16, f	ull heiğh	t, full lenğth,	75W				Disk bay 4x 3.5	SATA HD
								1	1 6 4x 3 5	~ SAFA HD

NVS 810		Graphics		Ma	ma	r) /	Power	Conn	octor	SLI /	Max	
NVS 810		Grapriics		Memory			Power Conne		CIOI			
Quadro P600 2GB GDDR5 45W 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4 4 4xminiDP 4 4 4 4 4xminiDP 4 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4 4xminiDP 4 4xminiDP 4 4 4 4 4 4 4 4 4											2	
Quadro P620												
Discrete Graphics												
Discrete Graphics Quadro P2000 SGB GDDR5 150W 4xDP 4x												
August												
Offering Quadro P5000 163B GDDRSX 180W DVI-D DL+4xDP \$1.3 Quadro P5000 163B GDDRSX 180W DVI-D DL+4xDP \$1.3 Quadro P6000 243B GDDRSX 250W DVI-D DL+4xDP \$1.3 Quadro RTX 5000 163B GDDR6 160W JSDR 1xVirtualLink \$1.3 Quadro RTX 5000 14GB GDDR6 265W 4xDP 1xVirtualLink NVLink \$3.0 Quadro RTX 8000 24GB GDDR6 295W 4xDP 1xVirtualLink NVLink \$2.0 Quadro GP100 163B HBM2 235W 1xDVI-D DL, 4xDP NVLink \$2.0 Quadro GP100 32GB HBM2 235W 1xDVI-D DL, 4xDP NVLink \$3.0 Storage Controller Onboard Intel RSTe Std SATA 6Gb/s 0/1/10/5 \$4.0 Storage Controller Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 \$4.0 \$4.0 \$4.0 Storage Controller Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 \$4.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td>									-			
Quadro P6000			-							01.1		
Quadro RTX 4000 8GB GDDR6												
Quadro RTX 5000										SLI		
Quadro RTX 6000										NIVI ink		
Quadro RTX 8000												
Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 3							295W	4xDP, 1xV	irtuall ink			
Storage Controller												
Storage Controller Type Interface SAID Cache												
Onboard Intel RSTe Sid SATA 6Gb/s 0/1/10/5 9440-8i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 4GB DDR4, SuperCap 9460-16i PCle Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5 4GB DDR4, SuperCap NVMe Basic Opt PCle NVMe 0/1/10/5 NVMe Premium Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt PCle NVMe 0/1/10/5 NVMe for Intel SD Opt				Type					RAID	Car	che	
Storage Controller											0110	
Storage Controller					SA							
NVMe Basic	Storage			-			,			AGR I	DDR4,	
NVMe Premium	Controller	9460-161 PCIE			SF					Supe	erCap	
NVMe for Intel SSD												
Disk Type												
Storage Support Storage Support Storage Support		NVMe for Intel	SSD	Opt		P	Cle NV	Me	0/1/10/5	5		
Storage Support Storage Support Storage Support		Disk Type	Interfa				Offeri	Offering		Max Qty		
HDD		• • • • • • • • • • • • • • • • • • • •				_						
Storage Support SATA SATA SATA HDD 6Gb/s SAS						1TR/2T		TB/6TB				
HDD				D/S		,,		15/015	4X 2.5)/HDD)	
Storage Support 2.5" SAS HDD						500GB/500GB FIPS			10			
Storage Support 2.5 SAS HDD 12Gb/s 10K 300GB/600GB 8				D/S								
2.5" SATA SATA 6Gb/s 256GB/512GB/1TB/2TB 10		2.5" SAS HDD				300GB/600GB				8		
SSD 6Gb/s 250GB/512GB/11B/21B 10 2.5" PCIe SSD PCIe NVMe 1.5TB 4 M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 9 PCIe AIC SSD PCIe NVMe 480GB 2 Bay Maximum Drives Qty Type M.2 slot 9x M.2 SSD (2 onboard, 7 via PCIe 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 drives 1x 5.25" 9.0mm optical drives 1x 5.25" SATA SSD/HDD with Front Access Storage Enclosure 1x flex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader or 2x Thunderbolt Port 1 and 2: Front USB 3.1 Gen 1 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 3.5" SATA HDD + 4x 2.5" SATA SSD/HDD	Storage Support	2.5" SATA				0500D/5400D/4TD/0T5						
Storage Bays Stor						256GB/512GB/11B/2				10		
M.2 PCle SSD PCle NVMe 256GB/512GB/1TB/2TB 9 PCle AIC SSD PCle NVMe 480GB 2 Bay Type 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 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 61ex module for the following options: Tray 1: 9.0mm optical Tray 2: 15-in-1 USB 3.1 Gen 1 reader or 2x Thunderbolt Port 1 and 2: Front USB 3.1 Gen 1 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 3.5" SATA HDD + 4x 2.5" SATA SSD/HDD		DC.		Cle			1 FT	D		1		
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│		• 4x 3.	5" SA1	TA HD	D +	- 4x 2.5	5" SATA	SSD/HDE)			
		• 8x 2.	5" SA	TA SS	D/H	IDD or	8x 2.5	" SAS HDD)			

ThinkStation P920 Platform Specifications

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

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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.

March, 2020 - Version 556 Additions in this update

► New product(s)

ThinkVision P27h-20 ThinkVision P24h-20

► 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

Tilt -5°~90° **Eye-care Technology**

Low blue light



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



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

Panel Size 14-inch

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

Panel Type In-Plane Switching

Backlight **WLED**

Aspect Ratio 16:9 Resolution

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

Dot/Pixel Per Inch (DPI/PPI) 157

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

6ms with OD Refresh Rate 60 Hz

Brightness (typical) 300 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical) 3M:1

Colour Gamut NTSC (CIE 1931)

72% **Color Support (typical)**

16.7 Million **Color Depth** 8bit (6bit + FRC)

Anti-Glare Yes

Video Input Signals

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

Power Consumption (Typ./Max)

output)

6 W / 7.5 W (Without USB Type-C **ENERGY STAR® Power Consumption**

(E_{TEC})

(Pon)

4.88 W

ENERGY STAR® Power Consumption

Power Consumption Sleep/Off

15.53 kWh

Mode < 0.3 W





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

Bezel Width (top / bottom) 5.47 mm / 23.87 mm

5.48mm

Size Packed (D x H x W)

(mm / inch) 276 x 61 x 402 mm / 10.87 x 2.40 x 15.83 inches

Size Unpacked w/stand

 $(D \times H \times W) (mm / inch)$ (Lowest position)

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

96.54 x 209.03 x 323.37 mm /

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

Stand base footprint area (mm²) 260.87 x 69.55 mm /

Weight Packed (kg / lbs.) 1.67 kg / 3.67 lbs.

Weight Unpacked (kg / lbs.)

10.27 x 2.74 inches

0.57 kg / 1.26 lbs.

1 x Monitor with stand

1 x ThinkVision M14 sleeve

1 x USB Type-C cable (1 m)

1x QSG

1x Pair of clips

0° to 40°C

Humidity - Operating

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

30 to 80% **Humidity - Non-operating** 30 to 90%

Altitude - Operating 0 to 5000 m **Altitude - Non-operating**

Arsenic-free Glass Yes **PVC** free

0 to 40,000 ft

Yes Mercury free

Geography Availability

85%

PCC % of plastic resins

WW Warranty 3 Years

ENERGY STAR® Rating

7.1 CCC Yes

EPEAT Bronze

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

Mercury free) **Windows Certification**

Windows 7 / 10

Image Quality Capability ISO 9241-307

Low Blue Light / Eye Comfort Yes (Low Bluelight)

China Energy Efficiency Standard

















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

Lenovo September 2015













T1714p Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FELAR1US / 60FELAT1EU

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

Viewable image size

17.0" (**432mm**) diagonal 13.3" x 10.6" (337.9mm x 270.3mm) Max view area (W x H) Optimum resolution 1280x1024

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

Brightness 250 nits or cd/m2 (typical)

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

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

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

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

8.71 lb; 3.95kg

Weight Limited warranty 3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

Presets / user settings Standard presets: 22;

Viewing adjustments

user settings: 22

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

Rotating screen None On screen display On screen display with digital user controls (8 languages)

Control features

Multiple input

Monitor connectors

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

Signal cables

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

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

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

Accessories Limited Warranty

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

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

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

See all monitors at www.lenovo.com/thinkvision

Features

• Includes dual input connection for attachment to two

Supports Lenovo Tiny PC and 3rd party thin client via

17-inch Square LCD monitor

Mercury Arsenic free glass

optional Lenovo bracket

Supports optional soundbar

Microsoft® Windows® 7 certified
 Microsoft Windows 8 certified

Microsoft Windows 8.1 certified

• Microsoft Windows 10 certified

Supports SXGA 1280x1024 resolution

systems concurrently (analog and digital)

ThinkVision T1714p Monitor













Lenovo™ ThinkVision® T2054p Monitor

SPECIFICATIONS

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





Global Model

Yes











E21 Wide Flat Panel Monitor Name **Black**

Bezel color

61B9JAR1US / 61B9JAT1EU Type-model

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

Viewable image size

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

Native resolution 1920x1080

Aspect ratio 16:9

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

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

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

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

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

Dimensions (HxWxD)

370.9mm H x 490.5mm W x 204.9mm D

18 watts typical, Power supply 23 watts maximum.

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

Weight

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

August 2017 Available date

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

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

SVGA: XGA: 1024x768, 1152x864

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

Presets display modes Standard presets: 22 **Features**

- Widescreen 20.7-inch monitor Supports 1920x1080 resolution
- Supports ThinkCentre Tiny Clamp Bracket
- · Supports optional soundbar
- EPEAT Gold certified
- Low Blue Light certification
 Microsoft® Windows® 7 certified
 Microsoft Windows 10 certified



ThinkVision F21 Wide Monitor

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

Rotating screen None

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

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

USB hub None

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

Monitor connectors

Signal cables

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

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

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

Limited Warranty

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

tail.page?DocID=UM008281

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision













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

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

Viewable image size Max view area (W x H)

23.8" (**604.7mm**) diagonal 20.75" x 11.67" (527.04mm x 296.46mm) **1920x1080** Native resolution

Aspect ratio 16:9

Pixel pitch (mm) 0.2745 x 0.2745 mm 92.5 dpi

Dot/Pixel per Inch

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

Dimensions (HxWxD)

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

Power supply

18 watts typical, 23 watts maximum,

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

Weight Limited warranty 8.2 lb; 3.7 kg
3 year (includes backlight) August 2017 Available date

VESA-compliant Power management Ergonomics

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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

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

SVGA: XGA: 1024x768, 1152x864

SXGA: 1280x1024 WXGA: 1366x768

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

Full HD: 1920x1080

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

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

Rotating screen None

On screen display

USB hub Multiple input

On screen display with digital user controls (8 languages) Control features Direct access (buttons on front) for power, menu, input source select and brightness

None 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













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

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

1000:1 (typical)

99% sRGB

4ms (extreme) / 6ms (typical)

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

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

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

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

Viewable image size

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

Native resolution Aspect ratio 16:9

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

Contrast ratio Pixel response time

Color gamut Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date VESA-compliant

April 2017 VESA DDC2B/CI ENERGY STAR® qualified

Power management

Presets display modes

USB hub

Ergonomics Emission standards Environmental

ISO 9241-307 FCC Class B

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

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

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

HDMI: 22; DP: 14

Features

 Widescreen 23.8-inch monitor • Supports 2560x1440 resolution

· Supports optional soundbar

Supports ThinkCentre Tiny Clamp Bracket

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision P24h Wide Monitor

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

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

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

Multimedia

Camera

Multiple input

Support HDMI, DisplayPort, USB 3.1 Type-C, DisplayPort-out (1) 2*HDMI (1.4), digital, **HDCP-compliant** (2) DisplayPort (1.2), digital, **HDCP-compliant** (3) DisplayPort-out, digital (4) USB 3.1 Type-C (1) USB 3.1 Type-C cable, 1.8 meter Monitor connectors

Signal cables

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

Security

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

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













Lenovo ThinkVision P24q

P24q Wide Flat Panel Monitor Name

Case color Black

61A5GAR3US / 61A5GAT3EU Type-model

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

Viewable image size

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

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

Pixel pitch (mm) 0.2058 x 0.2058mm

Dot/Pixel per Inch 123 dpi

Brightness 300 nits or cd/m2 (typical)

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

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

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

Bezel width **Dimensions**

(HxWxD, including stand)

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

67 watts maximum (with USB),

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

integrated (no external brick-like power supply)

12.35 lb; 5.6kg (including stand)

Weight Limited warranty 3 year January 2017 Available date

VESA-compliant VESA DDC2B/CI

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

Multiple input

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

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



ThinkVision P24q Monitor

ThinkVision P24a-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WIFD

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

123

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

99% sRGB, 99% BT.709, 84 % DCI-P3

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB3.1 Gen1 Type-B

USB Downstream

4 x USB3.1 Gen1 (1 x BC1.2)

SPECIAL FEATURES

Factory Calibration

Yes (Avg. Delta E<2)

POWER

Power Consumption (typical/max)

20W / 61W

Power Consumption Sleep/Off Mode

≤ 0.5W

Power Consumption Switch-off Mode

≤ 0.3W

ENERGY STAR Power Consumption

 (P_{op}/E_{TEC})

16.04W / 51.61kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (Max range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 X 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 / 21.4 mm

DIMENSION

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

620 x 149 x 423 mm / 24.4 x 5.9 x 16.7 inches

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

205 x 420 x 539.8 mm / 8.07 x 16.5 x 21.3 inches

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

 $205 \times 570 \times 539.8 \text{ mm} / 8.07 \times 22.4 \times 21.3 \text{ inches}$

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

44.6 x 325.7 x 539.8 mm / 1.8 x 12.8 x 21.3 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 117.9 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 415 mm

Weight Packed (kg/lbs.) 8.1 kg / 17.86 lbs. Weight Unpacked (kg/lbs.)

6.18 kg / 13.6 lbs.

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

3.85 kg / 7.89 lbs.

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

1395 / 645 units

WHAT'S IN THE BOX

MONITOR WITH STAND

1 X POWER CABLE (1.8 M)

1 X DP CABLE (1.8 M)

1 X USB TYPE-A TO TYPE-B CABLE (1.8 M)

FACTORY CALIBRATION REPORT

QUICK SETUP GUIDE

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO

8.0

TCO Edge

2.0

EPEAT Silver

Yes

Windows Certification

RoHS (EU 2002/95/EC)

Windows 7. Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Rheinland Eye Comfort

⁄es











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; 20 Gbit/s for USB 3.2.

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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-inch

Screen Dimensions (H x V)

527.04 x 296.46 mm

Panel Type

3-side NearEdgelss, VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V)

0.2745 x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)

92

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

178°/178°

Response Time (gray to gray)

4 ms (Extreme Mode)

6 ms (Normal Mode)

Refresh Rate

60 Hz

Brightness (typical)

250 cd/m²

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

01 1.1

Color Gamut NTSC (CIE 1931)

72% NTSC

Color Support

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x VGA 1 x HDMI 1.4

Video Cable Length

1.8 m

Audio Signal

1 x Audio Out (3.5 mm)

MULTI-MEDIA

Optional Speakers Support

Yes

SPECIAL FEATURES

Sync Technology

FreeSync™

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

POWER

Power Consumption (Typ./Max)

24W / 31W

Power Consumption Sleep/Off Mode

< 0.3W

Power Consumption Switch-Off Mode

< 0.3W

Power Supply

Internal

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5º / 22º

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 22 mm

DIMENSION

Size Packed (D x H x W)

(mm/inch)

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

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

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

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

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

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

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

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

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

399.9 mm

Weight Packed (kg/lbs.)

4.84kg / 10.67 lbs.

Weight Unpacked (kg/lbs.)

3.36kg / 7.41 lbs.

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

3.07kg / 6.77 lbs.

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

1660 / 800 Units

WHAT'S IN THE BOX

Monitor with stand

1 x HDMI Cable 1 x Power Cable (1.8m)

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.1

CCC

Yes

EPEAT™

Silver

ULE

Gold

RoHS (EU 2002/95/EC)

Yes(2011/65/EU)

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Low Blue Light

Yes











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ThinkVision S24q-10

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

124

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

240 cd/m²

Brightness (peak)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

20W / 31W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

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

16.76 W / 52.75 kWh

Voltage Required

AC 100 to 240 V (47/63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 21.4 mm

DIMENSION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR® Rating

8.0

CCC

Yes

TCO

TCO Edge

2.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7. Windows 10

China Energy Efficiency Standard Tier 1

TÜV Eye Comfort

Yes















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

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ThinkVision T2224d MONITOR

SPECIFICATIONS

DISPLAY		MECHANICAL	
Panel Size Panel Type Backlight Screen Dimensions (W x H) (mm) Resolution Aspect Ratio Viewing Angle (H/V at CR 10:1) Maximum Brightness (Typical) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931) NTSC Number of Colors Response Time Anti-Glare	21.5" IPS WLED 476.064 (H) x 267.786 (V) 1920 x 1080 16:9 (Wide) 178°/178° 250 cd/m² 1000:1 3000000:1 0.248 102 72% 16.7 Million 4 ms (extreme mode) Yes	Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift Range Pivot VESA* Mount (mm) Kensington* Lock Slot Cable Management Ambient Light Sensor Control Buttons Bezel Color Bezel Width Bottom (mm / inches) Top (mm / inches) Sides (mm / inches)	-5° / 22° No No No 100 x 100 Yes Yes No Yes Raven Black 25.6 / 1.01" 17.6 / 0.69" 17.6 / 0.69"
SIGNAL INPUT		POWER CONSUMPTION	
Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied	VGA + DisplayPort™ VGA + DisplayPort™ 1.8 m No No	Typical Maximum Sleep-Mode Switch-Off Mode Power Supply Power Voltage Voltage Dynamic Frequency	20 W 25 W <0.5 W <0.5 W Internal 90 VAC - 264 VAC 47 Hz - 63 Hz
SIGNAL INTERFACE / PERFOR	MANCE	DIMENSIONS (W x D x H)	
Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed Bandwidth VGA DisplayPort™ Default Color Temperature Plug 'n' Play Preset Display Modes User-defined Display Modes OSD Buttons OSD Languages Lockable Controls	30 kHz - 83 kHz 50 Hz - 75 Hz 1920 x 1080 205 MHz 165 MHz 7200K Yes 22 22 5 8 No	Size Unpacked with Stand (mm) (inches) Size Unpacked without Stand (Head Only) (mm) (inches) Distance from Table to Panel (mm / inches) Lowest Pixel at Bottom of Screen Highest Pixel at Top of Screen Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only	512.9 × 204.9 × 381.4 20.19" × 8.07" × 15.01" 512.9 × 51 × 312.6 20.19" × 2.01" × 12.31" 94.4 / 3.72" 363.9 / 14.33" 180 × 180 / 7.09" × 7.09" Starting at 9.19 lbs (4.17 kg) Starting at 6.48 lbs (2.94 kg) Starting at 5.93 lbs (2.69 kg)
ENVIRONMENTAL		COMPLIANCE	
Temperature Operating Non-operating Humidity Operating Non-operating Altitude Operating Non-operating	0°C - 45°C -20°C - 60°C 10% - 80% 5% - 95% 5000 m 0 ft - 40,000 ft	EPEAT™ ENERGY STAR® Rating TCO RoHS (EU 2002/95/EC) Windows Certification Image Quality Capability China Energy Efficiency Standard	Silver 7.0 Display 7.0 / Edge 2.0 Yes Windows 7, Windows 10 ISO 9241-307 Tier 1
Arsenic-free Glass PVC-free	Yes Yes	WARRANTY AND AVAILABILIT	ГҮ
Mercury-free PCC % of Plastic Resins Low Halogen	Yes >85% No	Warranty Geography Availability Global Model	3 Years World Wide Yes





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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/de-

tail.page?DocID=UM008281

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 22.0-inch monitor • Supports 1680x1050 resolution

Supports ThinkCentre Tiny Clamp Bracket

Includes dual input connection for attachment to two

systems concurrently (analog and digital)

ÉPEAT Gold certified

Supports optional soundbar

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

Microsoft Windows 10 certified

ThinkVision T2254 Wide Monitor













T2254p Wide Flat Panel Monitor Name

Bezel color Raven black

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

60CCMAT2EU / 61BAMAT2EU

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

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

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

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

Pixel response time 5ms (typical) Color gamut

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

Bezel width Dimensions (HxWxD)

371.7mm H x 509.3mm W x 242.7mm D

Power supply

20 watts typical, 25 watts maximum,

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

Weight Limited warranty

10.14 lb; 4.60 kg

3 year (includes backlight) Available date March 2015

VESA-compliant Power management Ergonomics

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 Emission standards FCC Class B

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

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

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

WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 28;

user settings: 20

Features

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



ThinkVision T2254p Wide Monitor

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

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

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

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

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

Security

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

1.8 meter black power cord

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision













ThinkVision T22i-10 MONITOR



SPECIFICATIONS

DISPLAY

(mm)

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

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

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

21.5" Wide 1920 x 1080

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

72% 16.7 Million 4/6/14 ms

DIMENSIONS (W x D x H)

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

(mm) (inches)

Size Monitor Head Only

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weight Packed

Unpacked Monitor Head Only

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

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

240 x 240 9.45" x 9.45"

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

CONNECTIVITY Video Input Signals

Video Cables Supplied (Length)

Audio OSD Languages VGA + HDMI™ 1.4 + DisplayPort™ 1.2

18 m Audio-Out

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

POWER CONSUMPTION

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

MECHANICAL

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

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

COMPLIANCE

Arsenic-Free Glass Yes Yes; Without Cable PVC-Free Mercury-Free Yes EPEAT™ Silver **ENERGY STAR® Rating** 7.0 TCO® 7.0

TCO Edge 2.0 RoHS (EU 2002/95/EC) Yes China Energy Efficiency Standard Tier 2 Windows Certification Windows 7 / Windows 10





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ThinkVision T22V-10 MONITOR

SPECIFICATIONS

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

MECHANICAL

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

COMPLIANCE

EPEAT™ ENERGY STAR* Rating ULE TCO ROHS (EU 2002/95/EC) Windows Certification China Energy Efficiency Standard TÜV Eye Comfort	Silver 7.0 Gold TCO Display 7.0 / TCO Edge 2.0 Yes Windows 7 / Windows 10 Grade 2 Yes
TOV Lye Connort	163

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months ww Geography Availability





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













T2324d Wide Flat Panel Monitor Name

Bezel color **Black**

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

Viewable image size

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

1920x1080 Native resolution

Aspect ratio 16:9

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

Brightness 250 nits or cd/m2 (typical)

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

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

Tilt stand Stand

Sides: 0.68" (17.3mm) Bezel width

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

Power management Ergonomics Emission standards

ENERGY STAR® qualified ISO 9241-307

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 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

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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/deAccessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock 73P2582

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 23.0-inch monitor

• Supports 1920x1080 resolution

· Supports optional soundbar

Supports ThinkCentre Tiny via VESA back mount

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

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision T2324d Wide Monitor

Lenovo July 2016

45K1620













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

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

1920x1200

Features

Widescreen 22.5-inch monitorSupports 1920x1200 resolution

Supports ThinkCentre Tiny Clamp Bracket

Supports optional soundbar

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision T23d-10 Wide Monitor

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

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

WUXGA:













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

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

Viewable image size Max view area (W x H)

Native resolution Aspect ratio Pixel pitch (mm)

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

Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date

Preset resolutions

Control features USB hub

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

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

16:9 0.2652 x 0.2652 mm 95.8 dpi

250 nits or cd/m2 (typical)

1000:1 (typical) 6ms (typical)

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

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

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

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

VGA: 640x480, 720x400 SVGA: 800x600

XGA: 1024x768, 1152x864

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

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

 Widescreen 23-inch monitor • Supports 1920x1080 resolution

Supports ThinkCentre Tiny Clamp Bracket

 Includes dual input connection for attachment to two systems concurrently

ÉPEAT Silver certifiéd

Microsoft® Windows® 7 certified
 Microsoft Windows 10 certified



ThinkVision T23i Wide Monitor

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

On screen display with digital user controls (8 languages)

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

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

Multiple input Monitor connectors

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

(1) detachable, VGA 13-pin b-shell at each end, digital, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter
(3) detachable, HDMI at each end, digital, 1.8 meter (NA)
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Mounting features Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Security

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

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

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision













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

Dot/Pixel per Inch Brightness Contrast ratio Pixel response time Color gamut 77.4%

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

Security

94 dpi

300 nits or cd/m2 (typical) 1000:1 (typical) 7ms (typical)

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)

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

March 2015

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

VGA: 640x350, 640x480, 720x400 800x600

SVGA: XGA: 1024x768 SXGA: 1280x1024

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

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

- Widescreen 24.0-inch monitor • Supports 1920x1200 resolution
- Supports ThinkCentre Tiny Clamp Bracket

Supports optional soundbar

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

EPEAT Gold certified

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

Microsoft Windows 10 certified



ThinkVision T2454p Wide Monitor

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

1.8 meter USB signal cable, 1.8 meter black power cord

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision













ThinkVision T24d-10 MONITOR

SPECIFICATIONS

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

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

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

SIGNAL INTERFACE / PERFORMANCE

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

ENVIRONMENTAL

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

MECHANICAL

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

COMPLIANCE

Warranty

Geography Availability

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

3 Years

WW

WARRANTY AND AVAILABILITY

* NA only.

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

















Think Vision T24h-20

DISPLAY

Panel Size

23.8-inch

Screen Dimensions

526.85 mm x 296.35 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2058 x 0.2058 mm

Dot/Pixel Per Inch (DPI/PPI)

123

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x USB Type-C Gen1 (DP 1.2 Alt Mode) 1 x HDMI 1.4

1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C)

USB Downstream

4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

23W / 120W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Energystar Power Consumption (Pon/ETEC)

16.36W / 53.37kWh

Power Supply

Internal

USB Type-C Power Delivery (W)

up to 75W*

Smart Power

Yes

Voltage Required

AC 100 to 240 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45°/ -45°

Lift (max range)

150 mm

Pivot

-90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 24.1 mm

DIMENSIONS

Size Packed

(D x H x W, mm/inch) 620 x 149 x 423 mm 24.4 x 5.9 x 16.7 inches

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

205 x 420 x 539.8 mm 8.07 x 16.5 x 21.3 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 205 x 570 x 539.8 mm

8.07 x 22.4 x 21.3 inches

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

44.6 x 325.7 x 539.8 mm 1.8 x 12.8 x 21.3 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 117.9 mm

Max. Distance from Table to Panel (highest pixel at

415 mm

Weight Packed (kg/lbs.) 8.1 kg / 17.86 lbs.

top of screen, mm)

Weight Unpacked (kg/lbs.) 6.18 kg / 13.6 lbs.

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

3.85 kg / 7.89 lbs.

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

1395 / 645 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

1x DP cable (1.8 m) (NA & LA only)
1x USB Type-C to Type-C cable (1.8 m)
1x USB Type-C to Type-A cable (1.8 m)

(NA & LA only) Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating 8.0

ccc

Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort















*Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher

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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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)

Raven Black

POWER CONSUMPTION

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

Power Voltage 90 VAC - 264 VAC

MECHANICAL

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

VESA® Mount (mm x mm) Bezel Color

Bezel Width

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

WHAT'S IN THE BOX

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

CERTIFICATIONS

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

Windows Certification Windows 7 / Windows 10 TüV Eye Comfort Certification

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

















ThinkVision T24i-19 MONITOR



SPECIFICATIONS

DISPLAY

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

(mm) (inches) Brightness

Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Speakers Pivel Pitch (mm)

Pixel Pitch (mm)
Color Gamut (CIE 1931)
Color Depth
Color Support (Typical)

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

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 bit 16.7 Million

4 ms / 6 ms

5

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

DIMENSIONS (W x D

 Size Packed

 (mm)
 422 x 622 x 190

 (inches)
 16.61" x 24.48" x 7.48"

 Size Unpacked with Stand

Lowest Position
(mm)

(inches) Highest Position

(mm) (inches)

Size Unpacked without Stand (Monitor Head Only)

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weight Packed Unpacked

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

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

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

250 x 250 9.84" x 9.84"

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

oad 1140 / 540 Units

CONNECTIVITY

 Video Input Signals
 VGA + HDMI™ + DisplayPort™

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

 USB Hub
 USB 3.0¹ (4 x down, 1 x BC)

 Audio Out
 Yes (3.5 mm)

 Power
 Internal

 Soundbar Support*
 Yes

MECHANICAL

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

POWER CONSUMPTION

 Typical
 16.5 W

 Maximum
 59 W

 Sleep-Mode
 <0.5 W</td>

 Switch Off-Mode
 <0.3 W</td>

 Power Supply
 Internal

 Power Voltage
 90 VAC - 264 VAC

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

WHAT'S IN THE BOX

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

CERTIFICATIONS

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

TüV Eye Comfort Certification Yes
TINY Support Yes





Optional.

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













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

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

Presets display modes	XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050 Full HD: 1920x1080,1920x1200 HDMI: 19; DP: 11	ThinkVision T24m Wide Monitor	
Viewing adjustments Rotating screen	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait		
On screen display	On screen display with digital user controls (8 languages)		
Control features	Direct access (buttons on front) for power, menu, input source select and brightness		
USB hub	USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)		
Multimedia	Audio-out, optional sound bar supported Support HDMI, DisplayPort, USB 3.1 Type-C		
Multiple input Monitor connectors	(1) HDMI (1.4), digital, HDCP-compliant		
Worldon Connectors	(2) DisplayPort (1.2), digital, HDCP-compliant		
	(3) USB 3.1 Type-C		
Signal cables	(1) 1.8 meter ÚSB Type-C to USB Type-C cable		
Mounting features	Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount		
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	













ThinkVision T24V-10 MONITOR

SPECIFICATIONS

DISPLAY		ENVIRONMENTAL	
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (CIE 1931)	23.8" In-Plane Switching WLED 1920 x 1080 16:9 Yes 527.04 x 296.46 250 cd/m² 178°/178° 1000:1 3M:1 0.25 x 0.25 102 72% SRGB	Temperature Operating Non-Operating Humidity Operating 46 Altitude Operating Non-Operating Arsenic-Free Glass PVC-Free Mercury-Free	0°C - 40°C -20°C - 60°C 10% - 80% 5% - 95% 0 m - 8000 m 0 ft - 40,000 ft Yes Yes Yes >85%
Response Time (Extreme/Typical/Off) POWER CONSUMPTION	4/6/14 ms (G-to-G)	DIMENSIONS (W x D x H)	70370
Typical Maximum Sleep-Mode Switch Off-Mode Power Supply Power Voltage Voltage Dynamic Frequency SIGNAL INPUT Video Input Signals Video Cables Supplied Video Cable Length USB Hub USB Cable Supplied Audio-Out	20 W 45 W <0.5 W <0.3 W Internal 90 VAC - 264 VAC 47 Hz - 63 Hz HDMI™ 1.4 + DisplayPort™ 1.2 + VGA HDMI™ (ROW) + DisplayPort™ + VGA + USB 3.0¹ 1.8 m Yes Yes Yes Yes (3.5 mm)	Size Packed (mm) (inches) Size Unpacked with Stand Lowest Position (mm) (inches) Highest Position (mm) (inches) Size Unpacked without Stand (Monitor Head Only) (mm) (inches) Distance from Table to Panel	608 x 395 x 187 23.94" x 15.55" x 7.36" 540.2 x 261.9 x 390.5 21.28" x 10.32" x 15.39" 540.2 x 261.9 x 500.5 21.28" x 10.32" x 19.72" 540.2 x 43.8 x 343.7 21.27" x 1.72" x 13.53"
SIGNAL INTERFACE / PERFO	DRMANCE	Lowest Pixel at Bottom of Screen (mm / inches)	69.6 / 2.74"
Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/ Bandwidth Default Color Temperature Preset/User Modes OSD Buttons OSD Languages	30 kHz - 81 kHz 50 Hz - 75 Hz 1920 x 1080 VGA : 205 MHz HDMI™ : 165 MHz DisplayPort™ : 165 MHz 6500K 27/21 5+2 Buttons English, French, German, Spanish, Italian, Japanese, Simplified Chinese, Russian	Highest Pixel at Top of Screen (mm / inches) Stand Base Footprint Area (mm / inches) Weight Packed Unpacked Monitor Head Only	69.6 / 2.74" 242.5 x 212.8 / 9.55" x 8.38" Starting at 15.78 lbs (7.16 kg) Starting at 11.18 lbs (5.07 kg) Starting at 7.3 lbs (3.31 kg)
MECHANICAL		COMPLIANCE	
TU 4 1 (5 1 / 5 1)	E0 / 700	EDE ATIM	2:1

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

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

WARRANTY AND AVAILABILITY

Warranty ROW

3 Years PRC 18 Months WW Geography Availability





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













X24 Pro Wide Flat Panel Monitor Name

Bezel color **Black**

60E4ECR1US / 60E4ECT1US / 60E4ECT1EU Type-model

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

White LED backlight

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

Native resolution

Aspect ratio 16:9 Pixel pitch (mm) 0.2745 x 0.2745 mm Dot/Pixel per Inch 92 dpi

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stànd

Bezel width

Dimensions (HxWxD)

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

20 watts typical, 90 watts maximum, Power supply

<0.5 watts standby/suspend, universal,

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

July 2016 Available date

ENERGY STAR® qualified Power management Ergonomics ISO 9241-307

Emission standards FCC Class B

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

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

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

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

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

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

Rotating screen None

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

RealSense 3D camera SR300 Camera

mealsense 3D camera SR300

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

Monitor connectors

Signal cables

Mounting features None

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

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

Micro USB 3.0 cable (for using camera)

Limited Warranty Accessories

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

tail.page?DocID=UM008281

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

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 23.8-inch monitor • Supports 1920x1080 resolution

 Includes dual input connection for attachment to two systems concurrently

EPEAT Silver certified

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

One cable docking through USB 3.1 Type C

with power delivery

• Windows Hello certified

Microsoft® Windows® 10 certified



ThinkVision X24 Pro Wide Monitor

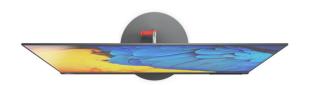












Lenovo ThinkVision X24-20

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

Rotating screen

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

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

USB hub None

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

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

Signal cables Mounting features

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

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

1.8 meter black power cord

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













Lenovo ThinkVision P27h

P27h Wide Flat Panel Monitor Name

Case color **Black**

61AFGAR1US / 61AFGAT1EU Type-model

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

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

Viewing angle at 10:1 CR

178° horizontal, 178° vertical Stand

Bezel width **Dimensions**

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

<0.5 watts sleep/off;

<0.5 watts switch off

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

Weight Limited warranty 3 year April 2017 Available date

VESA-compliant Power management Ergonomics Emission standards

Environmental

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

Presets display modes HDMI: 22; DP: 14

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

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

Multimedia

Camera

Viewing adjustments Rotating screen

Multiple input

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

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

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

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

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

 Supports optional soundbar Support ThinkCentre Tiny

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27h Monitor

Lenovo July 2017













Lenovo ThinkVision P27q

P27q Wide Flat Panel Monitor Name

Case color Black Type-model 61A8GAT1EU

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

Brightness 350 nits or cd/m2 (typical)

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

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

Stand

Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 20.21" H x 24.17" W x 10.62" D; Bezel width **Dimensions** 513mm H x 614mm W x 269.8mm D (HxWxD, including stand) Power supply

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

integrated (no external brick-like power supply)

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

3 year January 2017 Available date

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

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

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor

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

Support ThinkCentre Tiny

• Supports optional soundbar Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision P27q Monitor

Lenovo July 2017













Lenovo P27q-20

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

4-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 109

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

Color Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

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

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

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

USB Downstream

4 x USB3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

22W / 57W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

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

18W / 57kWh

Power Supply

Internal

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45° / -45°

Lift (Max range)

135 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 X 100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 2.0 mm

DIMENSION

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

182.0 x 463.0 x 722.0 mm / 7.17 x 18.23 x 28.43 inches

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

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

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

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

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

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

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

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 567.9 mm

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

Weight Unpacked (kg/lbs.)

7.12 kg / 15.7 lbs.

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

4.64 kg / 10.23 lbs.

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

792 / 352 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m)

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

Quick setup guide

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO 8.0

TCO Edge

2.0

FPFAT

Silver

RoHS (EU 2002/95/EC)

Windows Certification Windows 7. Windows 10

China Energy **Efficiency Standard**

Tier 1

TÜV Rheinland Eye Comfort

Yes













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

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Lenovo ThinkVision P27u

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

(3) USB 3.1 Type-C

Signal cables

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

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

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

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













ThinkVision® P32u-10 **SPECIFICATIONS**

DISPLAY

Panel Size 32 inches

Screen Dimensions (H x V) 708.48 x 398.52mm

Panel Type In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 3840 x 2160 pixels

Pixel Pitch (H x V) 0.1845 x 0.1845mm

Viewing Angle (H x V) 178°/178°

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

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

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

Color Support 1.07 Billion

CONNECTIVITY

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

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

Audio Out Yes (3.5mm)

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

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

DIMENSIONS

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

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

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

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

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

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

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

WEIGHT

Weight Packed 14.30kg/31.32lbs.

Weight Unpacked 10.97kg/24.18lbs.

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

SPECIAL FEATURES

Factory Calibration

Yes

Anti-Glare Yes

PIP/PBP Yes

KVM switch Yes

Software

Yes (ThinkColor)

MECHANICAL

Tilt Angle (front/back)

Swivel Angle (left/right) -45°/+45°

Lift (Max range) 110mm

Pivot -90°/90°

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2mm

Bezel Width (top/bottom) 2.0/23.8mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable 1 x DP-DP cable 1 x HDMI cable

1 x USB 3.0 cable

1 x Thunderbolt™ 3 cable (20Gbps) 1 x CD (ThinkColor) Factory calibration report Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

EPEAT™ Silver

CCC Yes

RoHS Yes

ULE Gold

TCO 7.0

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 2

TÜV Eye Comfort Yes























Specifications

DISPLAY

Panel Size 43.4 inches

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

Panel Type VA NearEdgeless, anti-glare

Curvature 1800R

Backlight WLED

Aspect Ratio 32:10

Resolution 3840 x 1200

HDR

VESA Certified DisplayHDR™ 400

Pixel Pitch (H x V) 0.2740 x 0.2740mm

Viewing Angle (H x V) 178°/178°

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

Refresh Rate Max. 144Hz

Contrast Ratio (typical) 3000:1

Dynamic Contrast Ratio (typical) 3M·1

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

Power Internal

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

DIMENSIONS

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

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

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

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

Weight Packed 18.59kg/40.98lbs.

Weight Unpacked 13.45kg/29.65lbs.

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

SPECIAL FEATURES

Anti-Glare Yes

PIP/PBP Yes

Software Yes (ThinkColor)

SpeakerSupports optional Harman
Kardon certified speaker

MECHANICAL

Tilt Angle (front/back) -5°/22°

Swivel Angle (left/right) ±30°

Lift (Max. range) Yes (130mm)

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot Yes

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2.4mm

Bezel Width (top/bottom) 2.4/25.6mm

WHAT'S IN THE BOX

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

CERTIFICATIONS

ENERGY STAR® Rating

CCC Yes

RoHS Yes

ULE

Gold TCO 8.0

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 2

Ambient Operating Temperature 0°C to 45°C

TÜV Eye Comfort Yes











*with FreeSvnc support graphic cards













ThinkVision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) x 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

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.)

4.22kg / 9.30 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Ye

(by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.68 mm

WHAT'S IN THE BOX

Monitor with stand

1x HDMI Cable

1x VGA Cable (AP. EMEA only)

1x Power Cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

7.0

TCO 70

EPEAT™

Silver

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



























ThinkVision S27q-10

DISPLAY

Panel Size

27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

2560 x 1440

Pixel Pitch

0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI)

109

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

178° / 178°

Response Time

4ms (extreme mode)

Refresh Rate

60 Hz

Brightness (typical)

280 cd/m²

Brightness (peak)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

> 99% sRGB

Color Support (typical)

1.07 Billion

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1x Audio Port (3.5 mm)

SPECIAL FEATURES

Tiny Support

Yes

POWER

Power Consumption (typical/max)

35W / 45W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

Power Supply

Internal

Energystar Power Consumption (Pon/ETEC)

19 W / 59.6 kWh

Voltage Required

AC 100 to 240 VAC (50/60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2 mm

Bezel Width (top/bottom)

2 / 22 mm

DIMENSION

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

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

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

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

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

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

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

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

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

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

Weight Packed (kg/lb) 6.36 kg / 14.02 lbs. Weight Unpacked (kg/lb)

4.65 kg / 10.25 lbs.

Weight (monitor head only) (kg/lb)

4.10 kg / 9.04 lbs.

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

1088 / 544 units

WHAT'S IN THE BOX

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

CERTIFICATION

ENERGY STAR® Rating

8.0

CCC

Yes

TCO 8.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Window 7, Window 10

China Energy Efficiency Standard

Tier 1

TÜV Eve Comfort

Yes









Window

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

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Think Vision S28u-10

DISPLAY

Panel Size

28-inch

Screen Dimensions

631 928 mm x 359 78 mm

Panel Type

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

3840 x 2160

Refresh Rate

60 Hz

Pixel Pitch (H x V)

0.1617 x 0.1580

Dot/Pixel Per Inch (DPI/PPI)

157.35

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

178° / 178°

Response Time

4ms (Extreme Mode)

6ms (Normal Mode)

Brightness (typical)

300 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut

99% sRGB, 90% DCI-P3 Color Support (typical)

1.07 Billion

CONNECTIVITY

Video Input Signals

HDMI 2.0 + DP 1.2

Audio Signal

1 x Audio Out (3.5mm)

POWER

Power Consumption (Typical/Max)

28W / 48W

Power Consumption Sleep/Off Mode

<0.3W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

Energystar Power Consumption

 (P_{on}/E_{TEC}) 28W / 87kwh

Voltage Required

AC 90 to 264 V (50/60 Hz)

DIMENSIONS

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

127 x 723 x 452 mm /

5 x 28.46 x 17.80 inches

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

229.99 x 450.82 x 636.94 mm / 9.05 x 17.72 x 25.08 inches

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

229.99 x 450.82 x 636.94 mm / 9.05 x 17.72 x 25.08 inches

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

49.2 x 373.68 x 636.94 mm / 1.94 x 14.71 x 25.08 inches

Weight Packed

7.0 kg / 15.43 lbs.

Weight Unpacked

5.24 kg / 11.55 lbs.

Weight (Monitor Head Only)

4.58 kg / 10.10 lbs.

SPECIAL FEATURES

Anti-glare

Yes

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington™ Lock Slot

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top/bottom)

2.0 / 22.8 mm

WHAT'S IN THE BOX

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

Quick setup guide

CERTIFICATIONS

ENERGY STAR® Rating

8.0

CCC

Yes

TCO

TCO Edge

2.0

EPEAT™

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Rheinland Eye Comfort

Yes

















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

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Think Vision T25d-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

533.45 x 338.76mm

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Refresh Rate

60Hz

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16.7M

CONNECTIVITY

Video Input Signals HDMI 1.4 + DP 1.2 + VGA

Video Cables Supplied

DP + HDMI*

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC

Audio Out

Yes (3.5mm)

POWER

Power Consumption (Typical/Max)

25W/66W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

16.54W

ENERGY STAR® (E_{тес}) 52.06kWh

Voltage Required

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

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

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

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

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

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

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

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

Weight Packed

7.8ka/17.20lbs.

Weight Unpacked

5.5kg/12.13lbs.

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

SPECIAL FEATURES

Anti-glare

Yes

Optional Soundbar Support

Yes

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

Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand

1 × Power Cable

1 × USB 3.1 Gen1 Cable 1 × HDMI™ Cable*

1 × DP Cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

7.1 **EU RoHS**

Yes

CCC Yes

TCO

TCO 8.0/TCO Edge 2.0

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

ULE Gold















*For NA and LA only

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

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Think Vision T25m-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

535 45 x 338 76mm

Panel Type

In-Plane Switching

Backlight

WIFD

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000.1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16 7M

CONNECTIVITY

Video Input Signals

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

Video Cables Supplied

USB 3.1 Type-C™

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C™)

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

POWFR

Power Consumption (Typical/Max)

30W/150W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

< 0.3 W

Power Supply

Internal

ENERGY STAR® (P.,.)

17.05W

ENERGY STAR® (ETEC)

63.12kWh

Power Voltage

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

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

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

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

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

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

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

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

Weight Packed

7.8kg/17.20lbs.

Weight Unpacked

5.5kg/12.13lbs.

Weight (Monitor Head Only)

3.58kg/7.89lbs.

SPECIAL FEATURES

Anti-glare

Yes

Smart Power*

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

Internal Speakers

Yes $(3W \times 2)$

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot

+/-90°

VESA Mount Capability Yes (100 x 100mm)

Kensington™ Lock Slot

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/22.2mm

WHAT'S IN THE BOX

Monitor with stand

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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ThinkVision T27h-20

DISPLAY

Panel Size 27-inch

Screen Dimensions

596.74 mm x 335.66 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio

Resolution

2560 x 1440

Pixel Pitch 0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 10.9

Viewing Angle (H x V @ CR 10:1) $178^{\circ} / 178^{\circ}$

Response Time

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical) 3M:1

Color Gamut 99% sRGB **Color Support (typical)** 16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x USB Type-C Gen1 (DP 1.2 Alt Mode) 1 x HDMI 1.4 1 x DP 1.2

Audio Signal

1 x Audio out (3.5 mm)

USB Hub Yes

USB Upstream 1 x USB 3.1 Gen1 (by USB Type-C)

USB Downstream

4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max) 23W / 122W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

Energystar Power Consumption (P_{on}/E_{TEC}) 18.1W / 57.6kWh

Power Supply Internal USB Type-C Power Delivery (W)

up to 75W*

Smart Power Yes

Voltage RequiredAC 100 to 240 V (50/60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right) +45° / -45°

Lift (max range) 135 mm

133 11111

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2 mm

Bezel Width (top/bottom) 2 / 23.87 mm

DIMENSION

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

694 x 163 x 480 mm 27.32 x 6.42 x 18.90 inches Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)

614 x 429.4 x 208 mm 24.17 x 16.9 x 8.19 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position) 614 x 564.4 x 208 mm 24.17 x 22.22 x 8.19 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 614 x 369.1 x 46.7 mm

24.17 x 14.53 x 1.84 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 85.2 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 564.4 mm

Weight Packed (kg/lbs.) 9.75 kg / 21.50 lbs.

Weight Unpacked (kg/lbs.) 7.6 kg / 16.76 lbs.

Weight (monitor head only) (kg/lbs.) 5.09 kg / 11.22 lbs.

Full Container Load (40' STD / 20' STD) 952 / 448 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) (NA & LA only) 1 x USB Type-C to Type-C cable (1.8 m) 1 x USB Type-C to Type-A cable (1.8 m) (NA & LA only) Quick setup guide **CERTIFICATION**

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification
Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort



Yes













*Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

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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DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLFD

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4 + DP 1.2

USB Hub

Yes

1 x USB 3.0 (Upstream)

4 x USB 3.0 (Downstream, incl. 1BC)

Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

Power Consumption

22W (Typical) / 58W (max) at On mode: < 0.5W at Sleep mode; < 0.3W at Switch off mode

MULTI-MEDIA

Optional Soundbar Support

DIMENSIONS

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

187 x 455 x 715 mm / 7.362 x 17.913 x 28.15 inch

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

269.8 x 403.3 x 611.9 mm / 10.62 x 15.88 x 24.09 inch

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

269.8 x 513.3 x 611.9 mm / 10.62 x 20.21 x 24.09 inch

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

49.9 x 366.5 x 611.9 mm / 1.96 x 14.43 x 24.09 inch

Weight Packed (kg/lbs.)

9.32kg / 20.55 lbs.

Weight Unpacked (kg/lbs.)

6.55kg / 14.44 lbs.

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

4.60kg / 10.14 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tinv)

(by Tiny Clamp Bracket Kit+VESA mount PN:4XF0N82412+

PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

-45°/+45°

Lift (Max range)

110 mm

Pivot

-90°/90°

VESA Mount

Yes (100 mm)

Kensington[™] Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x VGA cable

1 x DP-DP cable

1 x HDMI cable (NA only)

1 x USB 3.0 cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

TCO

7.0

EPEAT™ Silver

ULE

Gold

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Eye Comfort Certification

Yes













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ThinkVision T27p-10

DISPLAY

Panel Size

27.0 inches

Screen Dimensions (H x V) 596.74 x 335.66mm

Panel Type

In-Plane Switching

Backlight WLED

Aspect Ratio

16.9

Resolution

3840 x 2160 pixels

Pixel Pitch (H x V) 0.1554 x 0.1554mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Refresh Rate

60Hz

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

350 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support 1.07 Billion

POWER

Power Consumption (Typical/Max) 50W/140W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption

Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pan)

23.40W

ENERGY STAR® (E...)

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 $(D \times H \times W) (mm/inch)$ (Head Only)

45.5 x 368.4 x 611.6mm/ 1.79 x 14.5 x 24.08 inches

Weight Packed 11.00kg/24.25lbs.

Weight Unpacked 6.95kg/15.32lbs.

Weight (Monitor Head Only) 5.0kg/11.02lbs.

SPECIAL FEATURES

Smart Power*

Yes

Anti-glare

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

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

Yes

Bezel Width (top/bottom)

2.0/24.5mm

WHAT'S IN THE BOX

Monitor with stand 1x Power Cable

1 x HDMI Cable

1 x USB Type-C™ to Type-C™ cable

Quick Setup Guide

CERTIFICATIONS

ENERGY STAR® Rating

EU RoHS

Yes

CCC Yes

Windows Certification Windows 7. Windows 10

China Energy Efficiency

Standard Tier 2

TÜV Eye Comfort Yes

TCO

TCO 8.0/TCO Edge 2.0

ULE Gold















*The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device. 75W power delivery can be achieved when downstream USB ports are not connected and OSD brightness setting is <61.

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

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ThinkVision T27q-20

DISPLAY

Panel Size 27-inch

Screen Dimensions 596.74 mm x 335.66 mm

Panel Type 3-side NearEdgeless In-Plane Switching

Backlight WLED

Aspect Ratio 16:9

Resolution 2560 x 1440

Pixel Pitch 0.2331 x 0.2331 mm

Dot/Pixel Per Inch (DPI/PPI) 109

Viewing angle (H x V @ CR 10:1) $178^{\circ}/178^{\circ}$

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical) 1000:1

Dynamic Contrast Ratio (typical) 3M:1

Color Gamut 99% sRGB **Color Support (typical)**

16.7 Million

Anti-glare Yes

CONNECTIVITY

Video Signal 1 x HDMI 1.4 1 x DP 1.2

Audio Signal 1 x Audio Out (3.5 mm)

USB Hub Yes

USB Upstream 1 x USB 3.1 Gen1 (by USB Type-B)

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max) 23W/65W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode < 0.3W

Energystar Power Consumption (P_{on}/E_{TEC}) 17.4W / 54.4kWh

Power Supply Internal

Voltage RequiredAC 100 to 240 V (50/60 Hz)

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) +45° / -45°

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot Yes

Cable Management

Bezel Color Raven Black

Bezel Width (side) 2 mm

Bezel Width (top/bottom) 2 / 23.87 mm

DIMENSION

Size Packed (D x H x W, mm/inch) 694 x 163 x 480 mm 27.32 x 6.42 x 18.9 inches

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

614 x 429.4 x 208 mm 24.17 x 16.9 x 8.19 inches Size Unpacked w/ Stand (D x H x W, mm/inch) (highest position)

614 x 564.4 x 208 mm 24.17 x 22.22 x 8.19 inches

Size Unpacked w/o Stand (head only)(D x H x W, mm/inch) $614 \times 369.1 \times 46.7$ mm

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

2417 x 14 53 x 184 inches

85.2 mm

Max. Distance from Table to Panel (highest pixel at bottom of screen, mm) 564.4 mm

Weight Packed (kg/lbs.)

9.59 kg / 21.14 lbs.

Weight Unpacked (kg/lbs.) 7.44 kg / 16.4 lbs.

Weight (Monitor Head Only) (kg/lbs.)
4.93 kg / 10.87 lbs.

Full Container Load (40' STD / 20' STD) 952 / 448 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power Cable (1.8 m) 1 x DP cable (1.8 m) 1 x USB Type-B to Type-A cable (1.8 m) Quick setup guide **CERTIFICATION**

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7, Windows 10

China Energy Efficiency Standard Tier 1

TÜV Rheinland Eye Comfort













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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ThinkVision T32h-20 Monitor

DISPLAY

Panel Size 31.5-inch

Screen Dimensions 698.11 mm x 392.69 mm

Panel Type
3-side NearEdgeless
In-Plane Switching

Backlight WLED

Aspect Ratio

Resolution 2560 x 1440

Pixel Pitch 0.2727 x 0.2727 mm

Dot/Pixel Per Inch (DPI/PPI) 94

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

Response Time

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

Refresh Rate 60 Hz

Brightness (typical) 350 cd/m²

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical)

Color Gamut 99% sRGB Color Support (typical) 1.07 Billion

Anti-glare

CONNECTIVITY

Video Signal 1 x USB Type-C Gen1 (DP 1.2 Alt Mode) 1 x HDMI 1.4 1 x DP 1.2

Audio Signal 1 x Audio out (3.5 mm)

USB Hub Yes

USB Upstream 1 x USB 3.1 Gen1 (by USB Type-C)

USB Downstream 4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max) 28W / 138W

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode

Energystar Power Consumption (P_{on}/E_{TEC}) 21.6W / 69.2kWh

Power Supply Internal

USB Type-C Power Delivery (W) up to 75 W*

Smart Power

Voltage Required
AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back) -5° / 35°

Swivel Angle (left/right) $-45^{\circ} / 45^{\circ}$

Lift (max range) 135 mm

Pivot -90° / 90°

VESA Mount Capability Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color Raven Black

Bezel Width (side) 2.0 mm

Bezel Width (top/bottom) 2.0 / 24.12 mm

DIMENSION

Size Packed (D x H x W, mm/inch)528.0 x 190.0 x 845.0 mm / 20.79 x 7.48 x 32.27 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)
235.0 x 469.4 x 714.6 mm /

9.25 x 18.48 x 28.13 inches

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

235.0 x 604.4 x 714.6 mm / 9.25 x 23.79 x 28.13 inches

Size Unpacked w/o Stand (head only) (D x H x W, mm/inch) 714.6 × 426.0 × 51.0 mm /

714.6 x 426.0 x 51.0 mm / 28.13 x 16.77 x 2.01 inches

Min. Distance from Table to Panel (lowest pixel at bottom of screen, mm) 69.2 mm

Max. Distance from Table to Panel (highest pixel at top of screen, mm) 461.8 mm

Weight Packed (kg/lbs.) 12.96 kg / 28.57 lbs.

Weight Unpacked (kg/lbs.) 9.85 kg / 21.72 lbs.

Weight (monitor head only) (kg/lbs.) 6.78 kg / 14.95 lbs.

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

672 / 320 units

WHAT'S IN THE BOX

Monitor with stand
1 x Power cable (1.8 m)
1 x DP cable (1.8 m)
(NA & LA only)
1 x USB Type-C to Type-A cable
(1.8 m) (NA & LA only)
1 x USB Type-C to Type-C cable
(1.8 m)
Quick setup guide

CERTIFICATION

ENERGY STAR Rating 8.0

CCC Yes

TCO 8.0

TCO Edge 2.0

EPEAT Silver

RoHS (EU 2002/95/EC) Yes

Windows Certification
Windows 7. Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Rheinland Eye Comfort Yes















*Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

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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ThinkVision T32p-20

DISPLAY

Panel Size 31.5-inch

Screen Dimensions

698.11 mm x 392.69 mm

Panel Type

3-side NearEdgeless In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

3840 x 2160

Pixel Pitch

0.1816 x 0.1816 mm

Dot/Pixel Per Inch (DPI/PPI)

140

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio

(typical)

3M:1

Color Gamut

99% sRGB

Color Support (typical)

1.07 Billion

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x USB Type-C Gen1 (DP1.2 Alt Mode)** 1 x HDMI 2.0

1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

USB Hub

Yes

USB Upstream

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

USB Downstream

4 x USB3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

39W / 135W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.3W

ENERGY STAR Power Consumption

 (P_{op}/E_{TEC})

26.9W / 84.9kWh

Power Supply

Internal

USB Type-C power delivery (W)

up to 75W*

Smart Power

Yes

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5° / 35°

Swivel Angle (left/right)

+45°/-45°

Lift (max range)

135 mm

Pivot

-90° / 90°

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

2.0 mm

Bezel Width (side)

Bezel Width (top/bottom)

2.0 / 24.12 mm

DIMENSION

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

190 x 528 x 845 mm 7.48 x 20.79 x 32.27 inches

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

235 0 x 469 4 x 714 6 mm 9.25 x 18.48 x 28.13 inches

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

235.0 x 604.4 x 714.6 mm 9.25 x 23.79 x 28.13 inches

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

51.0 x 426.0 x 714.6 mm 2.01 x 16.77 x 28.13 inches

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

69.2 mm

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

461.8 mm

Weight Packed (kg/lbs.) 12.96 kg / 28.57 lbs.

Weight Unpacked (kg/lbs.)

9.85 kg / 21.72 lbs.

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

6.78 ka / 14.95 lbs.

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

672 / 320 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) (NA&LA only) 1 x USB Type-C to Type-C cable (1.8 m) 1 x USB Type-C to Type-A cable (1.8 m) (NA&LA only) Quick setup guide

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO 8.0

TCO Edge

20 **EPEAT**

Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification Windows 7. Windows 10

China Energy Efficiency Standard

Tier 1

TÜV Rheinland Eye Comfort Yes

















*Listed as the maximum capacity of power delivery. The actual capacity of power delivery may vary depending upon devices connected or monitor configuration and may decline with downstream USB ports connected or higher brightness settings.

**When connecting one cable USB Type-C at 4K 60Hz, the USB downstream will be USB2.0 by default due to technical limitations. Users can still use USB 3.0 by selecting in OSD and as a result, the display will be adjusted to 4K 30Hz.

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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Specifications

DISPLAY

Panel Size

34-inch

Screen Dimensions

797.2 mm x 333.7 mm

Panel Type

3-side NearEdgeless

Curvature

1500R

Backlight

WLED

Aspect Ratio

21:9

Resolution

3440 x 1440

Pixel Pitch

0.23175 x 0.23175 mm

Dot/Pixel Per Inch (DPI/PPI)

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

178° / 178°

Response Time

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

Refresh Rate

60 Hz

Brightness (typical)

350 cd/m²

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

Colour Gamut

99% sRGB

Color Support (typical)

16.7 Million

Anti-glare

Yes

CONNECTIVITY

Video Signal

1 x USB Type-C Gen1 (DP1.2 Alt Mode) 1 x HDMI 2.0 1 x DP 1.2

Audio Signal

1 x Audio Out (3.5 mm)

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C)

USB Downstream

4 x USB 3.1 Gen1 (1 BC)

POWER

Power Consumption (typical/max)

46W / 140W

Power Consumption Sleep/Off Mode

< 0.5W

Power Consumption Switch-off Mode

< 0.5W

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

34W / 107kWh

USB Type-C Power Delivery (W)

Up to 75W*

Smart Power

Yes

Voltage Required

AC 100 to 240 V (50-60 Hz)

MECHANICAL

Tilt Angle (front/back)

-5°/35°

Swivel Angle (left/right)

+45°/-45°

Lift (max range)

135 mm

VESA Mount Capability

Yes (100 x 100 mm)

Kensington Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.2 mm

Bezel Width (top/bottom)

2.2 mm / 27.8 mm

DIMENSION

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

523.0 x 250.0 x 980.0 mm / 20.59 x 9.84 x 38.58 inches

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

245.0 x 462.4 x 808.6 mm / 9.65 x 18.21 x 31.84 inches

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

245.0 x 597.4 x 808.6 mm / 9.65 x 23.52 x 31.84 inches

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

106.1 x 372.6 x 808.6 mm / 4.18 x 14.67 x 31.84 inches

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

119.1 mm

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

587.9 mm

Weight Packed (kg/lbs.)

13.85 kg / 30.53 lbs.

Weight Unpacked (kg/lbs.)

9.91 kg / 21.85 lbs.

Weight (monitor head only)

(kg/lbs.)

6.91 kg / 15.23 lbs.

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

432 / 216 units

WHAT'S IN THE BOX

Monitor with stand 1 x Power cable (1.8 m) 1 x DP cable (1.8 m) (NA & LA only) 1 x USB Type-C to Type-A cable (1.8 m) (NA & LA only) 1 x USB Type-C to Type-C cable (1.8 m) Quick setup guide

CERTIFICATION

ENERGY STAR Rating

8.0

CCC Yes

TCO 8.0

TCO Edge

2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Windows Certification

Windows 7, Windows 10

China Energy **Efficiency Standard**

Tier 2

TÜV Rheinland Eye Comfort















^{*}Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.









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

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

Direct access (touch buttons on front) for menu, mute, volume up/down, and brightness USB hub USB Hub: one USB 3.1 Type-C upstream port, four USB 3.0 Type-A downstream ports

Multimedia Integrated stereo speakers (3 watts x 2), bulit-in microphone

Camera Full HD camera with LED light Multiple input Support HDMI, DisplayPort

(1) HDMI (1.4), digital, **HDCP-compliant**(2) DisplayPort (1.2), digital, **HDCP-compliant**(1) detachable, HDMI at each end, digital, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter Monitor connectors Signal cables

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

Ship group Monitor, detachable stand, Quick start and safety poster, 1.8 meter DisplayPort cable, 1.8 meter HDMI cable,

1.8 meter USB Type-C cable, 1.8 meter USB Type-C to Type-A cable, 1.8 meter black power cord,

mini DP to DP adapter, power adapter (135W)

Limited Warranty

See details at http://support.lenovo.com/en US/quides-and-manuals/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



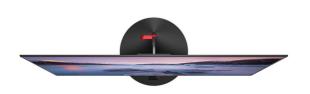






















ThinkVision X1 (2nd GEN) MONITOR

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

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

Aspect Ratio Anti-Glare Yes

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

Pixel Pitch (W x H) (mm) 0.1554 x 0.1554

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

POWER CONSUMPTION

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

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

SIGNAL INPUT

Video Input Signals DisplayPort™ 1.2 + HDMI™ 2.0 + Thunderbolt™ 3 Video Cables Supplied HDMI™ + Thunderbolt™ 3 18 m

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"

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

ENVIRONMENTAL

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

Humidity

8% - 80% Operating Non-Operating 5% - 95%

Altitude

16 000 ft Operating Non-Operating 40,000 ft

Arsenic-Free Glass Yes

PVC-Free Yes (W/O cable)

Mercury-Free Yes PCC % of Plastic Resins 25%

DIMENSIONS (W x D x H)

Size Packed (mm)

718 x 140 x 470 28.27" x 5.51" x 18.5" (inches)

Size Unpacked with Stand (mm)

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

Size Unpacked without Stand (Monitor Head Only)

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

Distance from Table to Panel Lowest Pixel at Bottom of Screen

134 / 5.276" (mm / inches)

Highest Pixel at Top of Screen (mm / inches) 450 / 17.717"

Stand Base Footprint Area

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

Weight

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

MECHANICAL

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

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

COMPLIANCE

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

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability ww





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

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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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