

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 555, February 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.

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Additions in this update

► New product(s)

None

▶ Others

ThinkPad 11e (5th Gen) - spec updated

ThinkPad E14, E15 - spec updated

ThinkPad T490 - spec updated

ThinkPad T495 - spec updated

ThinkPad T495s - spec updated

ThinkPad X395 - spec updated

Withdrawals in this update

► Withdrawn product(s)

None









ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, Int	tel Cel	eron® process	or, or	Dimensions Weight	<i>WxDxH</i> : 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb / 1.36 kg
		# of Cores	# of Threads	Base Frequency			Memory Types	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	
	Celeron N4100			1.1 GHz	2.4 GHz	4MB		Intel UHD Graphics 600	Ports	Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power
	Celeron N4120 Pentium Silver N5000	4	4	1.1 GHz 1.1 GHz	2.6 GHz 2.7 GHz	4MB 4MB	DDR4-2400	Intel UHD	-	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
	Pentium Silver N5030			1.1 GHz	3.1 GHz	4MB		Graphics 605	Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec, stereo speakers, 2W x 2, Dolby® Audio™,
Graphics	Intel HD Graph supports exter supports dual i Max resolution	nal dig	gital mor endent d	nitor via HŒ lisplav:	MI or US	В Туре	-C;	Hz (HDMI)	Keyboard Touchpad Security	mono digital microphone, combo audio/microphone jack 6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch Power-on password, supervisor password, security keyhole
Chipset Memory	Intel SoC (Sys 4GB or 8GB / soldered to sys	tem oi 1866N	n Chip) //Hz LPE	olatform DR3 or 24		-	<u> </u>	12 ()	Security Security chip System Mgt Fingerprint reade	Discrete TPM 2.0, TCG Certified None er None
Display	Size Resolution		Type Su			allo	Jonitasi Halio	Color Viewing Angle 45% 90°	Battery Max battery life	None Integrated Li-ion 42Wh battery MobileMark® 2014: 13.9 hr * Battery life varies significantly with settings, usage, & other factors
	11.6" HD (1366x				0 nits 1	6:9	800:1	45% 170°	AC adapter	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter
Multi-touch (opt)	Capacitive-type NOT available	e mult in EM	i-touch, EA)	supports 1	0-finger g	esture	(HD IPS only,	,	Operating system (optional)	n One of the following, configurable by model: • Windows® 10 Home 64
Storage	eMMC flash m M.2 SSD / PCI	emory le NVI	/ on boa de, PCle	rd or e 3.0 x 2, 1	6Gb/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 Gigal	oit Network	Connecti	on				1-year depot repair service
WLAN + Bluetooth™	One of the followIntel WirelessIntel Wireless	s-AC 9	260, Wi	-Fi [°] 2x2 802	2.11ac + E 2.11ac + E	Bluetoo Bluetoo	th 5.0, M.2 ca	rd rd (US onlv)	Mil-Spec test	3-year/1-yr battery depot repair service MIL-STD-810G military testing EDEATIM Silvery ENERGY OTAD® 6.1-Pol IS compliant
WWAN	None		,				,	· · · · · · · · · · · · · · · · · ·	Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
									1	

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

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ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Generation Intel Pentium®				cessor, Int	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	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1,			
	Celeron N4100 Celeron N4120			1.1 GHz 1.1 GHz	2.4 GHz 2.6 GHz	4MB		Intel UHD Graphics 600		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI1.4,Ethernet (RJ-45), headphone / microphone combo jack,			
	Pentium Silver N5000	4	4	1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD	Control buttons	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed Power button, volume control button			
	Pentium Silver N5030			1.1 GHz	3.1 GHz	4MB		Graphics 605	Camera	One of the following, configurable by model: 720p: HD720p resolution, low light sensitive, fixed focus			
Graphics	Intel HD Graph supports extern supports dual i	nal dig	jital mor endent d	iitor via Hˈ[isplav:	MI or USI	3 Туре	-C;		Audio support	World facing: Rear camera, 5MP resolution, auto focuss HD Audio, Realtek® ALC3287 codec Dolby Audio™ / stereo speakers, 2W x 2 / monaural microphone, headphone / microphone combo jack			
Chipset	Max resolution Intel SoC (Syst				SB Type-C	;); 409	96x2160@30F	łz (HDMI)	Keyboard UltraNav™	6-row, multimedia Fn keys Two buttons click pad below keyboard, multi-touch			
Memory	4GB or 8GB / soldered to sys	1866N	IHz ĽÝĎ	DR3 or 24	00MHz D	DR4/			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 rat								System Mgt (opt) Fingerprint reade	None rNone			
MultiTouch Hinge Convertible mode Pen	Capacitive-type Yoga hinge, 36 Laptop, tent, st Optional: Thin	0 deg	ree nd table	t ''	Ü	on-boa	rd garage		Battery Max battery life AC adapter	Integrated Li-Ion 42Wh battery MobileMark® 2014: 12 hrs * Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter or USB Type-C AC adapter			
Storage Optical	eMMC flash m M.2 SSD / PCI None				6Gb/s				Preload	One of the following, configurable by model: • Windows® 10 Home 64 • Windows 10 Pro 64			
Ethernet	Realtek RTL81	11GU	S-CG G	igabit Net	work Conr	ection				Windows 10 Pro in S mode			
WLAN	One of the follow Intel Wireless Intel Wireless	s-AC 9 s-AC 9	260, Wi- 560, Wi-	Fi 2x2 802 Fi 2x2 802	2.11ac + B	luetoo	th 5.0, M.2 ca		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year depot repair service			
Bluetooth™	Bluetooth wirel	less, ir	ntegrate	d in Wi-Fi	+ Bluetoot	n comb	oo adapter		Mil-Spec test	MIL-STD-810G military testing			
WWAN	None								Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant			

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ThinkPad E14 Platform Specifications

Processor	10th Generation Intel® * i7-10710U is NOT avail		/ i7 Processor				Dimensions	Case Material	Dimensions (WxDxH)		
	Processor # of # of		Max Turbo	Mem	nory	Processor	1	Aluminum	12.80" x 9.13" x 0.70"; 325mm x 232mm x 17.9mm		
	Number Cores Thre		Frequency Ca	iche Typ		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 4	MB MB			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		MB DDR4-	-2666 Intel	UHD Graphics	Weight	Case Material	Weight		
	i7-10710U 6 12	2 1.1 GHz	4.7 GHz 12	MB				Aluminum	starting at 3.81 lb / 1.73 kg		
Graphics	Integrated Graphics		Discrete Graphi	cs (Memory	/)		1	PC/ABS	starting at 3.90 lb / 1.77 kg		
	Intel UHD Graphics		·-		,			Aluminum Display cover + PC/ABS Bottom	starting at 3.74 lb / 1.69 kg		
	Intel UHD Graphics		MD Radeon 625	·			Case color				
	Intel UHD Graphics		deon RX 640 Gr		B GDDR5)		Case material				
	supports external digi			Type-C;				Bottom: Aluminur	m or PC/ABS plastic		
	Max resolution: 3840			3840x21	60@30Hz	z (HDMI)	Smart card reade				
Chipset	Intel SoC (System on	Chip) platform	1				Media reader Ports	None One USB 2.0 two USB 3	3.1 Gen 1 (one Always On),		
Memory	16GB max / 2666MHz	z DDR4, one D	DR4 SO-DIM	M socket			1 0110	one USB 3.1 Type-C Ger	n 1 (with the function of Power Delivery and DisplayPort),		
Display	Size Resolution	Type Surface	e Brightness			Viewing Angle		HDMI 1.4b, Ethernet (RJ security keyhole	-45), headphone / microphone combo jack,		
	14.0" FHD (1920x1080)	TN Anti-gla	re 220 nits		400:1	90°		* Depending on many factors	s, actual data transfer speed may be lower than theoretical speed		
	14.0" FHD (1920x1080)	IPS Anti-gla			700:1	170°	Monitor cable Bundled Accv	None None			
Multi-touch	None				,		Camera		ional ThinkShutter camera privacy, fixed focus		
Storage	Up to two drives (one M.	2 SSD and one	HDD)				Audio support				
•	 HDD / SATA 6.0Gb/ M.2 2280 SSD / SA 	s, 2.5" wide, 7	mm high, Activ	e Protection	on System	ı™		stereo speakers, 2W x 2,	Dolby® Advanced Audio /		
	• M.2 2242 SSD / PC		e 3.0 x 2 or P0	Cle 3.0 x 4			17. 1		eadphone / microphone combo jack		
	 M.2 2280 SSD / PC 	le NVMe, PCI	e 3.0 x 4				Keyboard UltraNav™		timedia Fn keys, optional LED backlight ce and buttonless Mylar surface multi-touch touchpad		
	 Intel Optane™ Mem M.2 2280, PCIe NV 		Solid State Sto	rage,			Security		d disk password, supervisor password, security keyhole		
Optical	None						Security chip	Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset None			
Ethernet	Gigabit Ethernet Con	nection, Realte	k R8111GUS				System Mgt				
WLAN +	One of the following, of						Fingerprint reade	r Optional: Touch style fin	gerprint reader on power button		
Bluetooth™	Realtek® RTL8822C						NFČ .	None			
	 Intel Wireless-AC 95 Intel Wi-Fi 6 AX201, 					a	Battery		attery, supports Rapid Charge (charge up to 80% in 1hr)		
WWAN	None						Max battery life	with 65W AC adapter MobileMark® 2014: 12.8	hr		
SIM card	None							* Battery life varies significa	ntly with settings, usage, & other factors		
							AC adapter	45W or 65W USB Type-0 One of the following, configu	· · · · · · · · · · · · · · · · · · ·		
							(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-year depot repair ser 	vice		
								1-year depot with 2-yea1-year limited onsite se	ar system board repair service		
							Mil-Spec test		esting (by the end of Dec. 2019)		
							Environment		Y STAR® 7.1; RoHS-compliant		
Note: The speci	fications above may not be	available in all	rogione				LIMIOIIIIEIII	LI LAI SIIVEI, LINENG	Lenove		



















ThinkPad E15 Platform Specifications

Processor	10th Generation Intel® * i7-10710U is NOT availa		/ i7 Processo	or			Dimensions			
		ads Frequency	Frequency	Cache 4MB	Memory Types	Processor Graphics	Case color Case material	Black or silver Display cover: Bottom: PC/ABS plastic		
	i3-10110U 2 4 i5-10210U 4 8	1.8 GHz	4.2 GHz 4.9 GHz	CNAD	DR4-2666	Intel UHD Graphics	Smart card reader 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	AN	Discrete Grap MD Radeon 62 deon RX 640 0	- 25 (2GB (GDDR5)	DR5)		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		
Chinaat	supports external digit supports three indepe Max resolution: 3840	ndent displays x2160@60Hz	s; (USB Type-0	•	•	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 16GB max / 2666MHz	DDR4, one D	DR4 SO-DI	MM soc			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 Multi-touch	Size Resolution 15.6" FHD (1920x1080) 15.6" FHD (1920x1080) None	Type Surface TN Anti-glai IPS Anti-glai	re 220 nits	Aspect Ratio 16:9 16:9	t Contras Ratio 400:1 700:1	Viewing Angle 90° 170°	Security Security chip System Mgt	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset None r Optional: Touch style fingerprint reader on power button		
Storage	Up to two drives (one M.2 • HDD / SATA 6.0Gb/s • M.2 2280 SSD / SAT • M.2 2242 SSD / PC • M.2 2280 SSD / PC • Intel Optane™ Mem	s, 2.5" wide, 7i IA 6.0Gb/s Ie NVMe, PCIe Ie NVMe, PCIe ory H10 with S	mm high, Ac = 3.0 x 2 or F = 3.0 x 4	PCIe 3.0	-	stem™	NFČ Battery Max battery life AC adapter	None 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		
Optical Ethernet	M.2 2280, PCIe NVI None Gigabit Ethernet Conr		Jr D0111CH	IC .			(optional)	 Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro in S mode 		
WLAN + Bluetooth™	One of the following, of Realtek® RTL8822C Intel Wi-Fi 6 AX201,	configurable by E, Wi-Fi 2x2 8	/ model: 02.11ac + Bl	luetooth			Limited warranty (optional)	1-year mail-in repair service 1-year depot repair service 1-year depot with 2-year system board repair service		
WWAN SIM card	None None						Mil-Spec test Environment	MIL-STD-810G military testing (by the end of Jan. 2020) EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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

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ThinkPad E480 Platform Specifications

Processor				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	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sock * System clocks down for processors with lower memory controller								vPro	None None Touch style fingerprint reader on the palm rest None
Display					68), anti-gla		D backlight,	,	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: 14	.0" (35	55mm) Fİ	HD (1920x)	1080), anti- 00:1 contra	glare, I	_ED backlig	ght, IPS,	Max battery life	with 65W AC adapter MobileMark® 2014: 13.51 hr * Battery life varies significantly with settings, usage, & other factors
Multi-touch	None		·						AC adapter	45W or 65W USB Type-C AC adapter
Storage				and one HE	<i>DD)</i> ride, remov	ahle ur	naradable		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	Some: M.	tive Pr 2 SSD	otection : O / PCIe N	System™ VVMe					Limited warranty	1-year mail-in repair service
Optane™ memor Optical	y <i>Optional:</i> None	Intel O	ptane m	emory, PCI	le NVMe, F	Cle 3.0) x 2		Mil-Spec test	1-year depot repair service MIL-STD-810G military testing
Ethernet		hernet	Connect	tion, Realte	k R8111G	US			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
WLAN + Bluetooth™	One of the five Realtek® • Realtek II • Intel Dua	following RTL88 RTL88 al Banc	g, configur 821CE, V 22BE, W d Wireles	rable by mod Ni-Fi 1x1 8 Vi-Fi 2x2 80 s-AC 3165	<i>del:</i> 02.11ac + 2.11ac + B , 1x1, Wi-F	Bluetoo luetootl i + Blue	oth 4.1, M.2 h 4.1, M.2 c etooth 4.1, M 4.1 by Wind	card M.2 Card	Liviloriillent	El EAT GOIA (GG GHIY), ENERTAT GTALL G.1, FIGURE COMPILATE
WWAN SIM card	None None									
	None	may n	ot be ava	ilable in all	regions.					

























ThinkPad E490 Platform Specifications

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 matarial	Display cover: Aluminum or PC/ABS plastic;				
Ports Port			8			OIVID	55210		620	Smart card reade					
Intel UHD Graphics 220 in processor and MM Radeon RX 550X Graphics, 22B GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 4996x2304 €00Hz (USB Type-C); 4096x2160 €24Hz (HDMI) Chipset Intel SoC (System on Chip) platform Memory is actually 2666MHz but run at 2400MHz duel-channel capable, two DDR4 SO-DIMM sockets in stalled memory is actually 2666MHz but run at 2400MHz duel on Intel Imitation. Display Size / Resolution Surface Type Brightness Aspect Contrast Viewing Multi-louch Ratio Ra		* i5-8365U is for spe	eicial bid	only						Ports 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 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 16:9 400:1 170° 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° FHD	Memory	32GB max / 2400	MHz DE	ÒŔ4. dual-c	hannel cap ut run at 240	able, to	wo DDR4 state to Intel I	SO-DIMI imitation	M sockets		HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /				
Security chip 14.0" FHD (1920x1080) Anti-glare TN 220 nits 16:9 400:1 90° Non-touch 14.0" FHD (1920x1080) Anti-glare IPS 250 nits 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:9 600:1 170° Non-touch 16:0" Fingerprint reader Mone Mone M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 M.2 2280 SSD / S	Display			71	brightness	Ratio	Ratio	Angle			6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
14.0" FHID (1920x1080) Anti-glare 1N 220 nits 16:9 40.0"1 90" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 40.0"1 700" Non-touch 14.0" FHID (1920x1080) Anti-glare IN 220 nits 16:9 600:1 700" Non-touch System Mgt Fingerprint reader Optional: Touch style fingerprint reader on the palm rest None Optional: Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) None None None None System Mgt Fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: Touch style fingerprint reader Optional: None None None										Security	, , , , , , , , , , , , , , , , , , , ,				
None Storage Up to two drives (one M.2 SSD and one HDD)											Integrated model: discrete TPM 2.0, TCG Certified				
HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Active Protection System™ • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3x4 but run at PCIe 3x2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: ■ Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card ■ Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None MFC None	Multi-touch	None									None				
• M.2 2280 SSD / SATA 6.0Gb/s • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Installed M.2 2280 SSD is PCIe 3.0 x 4 to run at PCIe 3.2 due to M.2 SSD adapter limitation Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Gigabit Ethernet Connection, Realtek R8111GUS WLAN + Bluetooth™ One of the following, configurable by model: • Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card WWAN None 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	620 in processor DX Graphics, 20 ital monitor via endent display; 6x2304@60Hz (rand 3B GDDR5 n HDMI or USI	В Туре	e-C;	⊉24Hz	(HDMI)	Ports Monitor cable Bundled Accy	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset Memory	Intel SoC (System on 32GB max / 2400MHz * Installed memory is act	z DDŔ4, dual-c	hannel capa ut run at 2400i	ble, tw MHz du	o DDR4 ue to Intel i	SO-DI limitatio	MM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec /
Display	Size / Resolution	Surface Type		spect Ratio	Contrast \	/iewing Angle	Multi-touch		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	14.0" FHD (1920x1080) 14.0" FHD (1920x1080)		220 nits	16:9 16:9	400:1	90° 170°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	None	Allu-glate IFS	250 11115	10.9	600.1	170	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified
Storage	One of the following, con • M.2 2280 SSD / SAI • M.2 2242 SSD / PCI • M.2 2280 SSD / PCI	TĂ 6.0Gb/s De NVMe, PCIe De NVMe, PCIe	3.0 x 2 3.0 x 4					System Mgt	None Address of the palm rest None None Touch style fingerprint reader on the palm rest None
Optical	* Installed M.2 2280 SSE None	D is PCIe 3x4 but	run at PCIe 3x	x2 due	to M.2 SSI	D adapi	ter limitation	Battery	Integrated Li-ion 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Ethernet	Gigabit Ethernet Conr	nection, Realtel	k R8111GUS	S				Max battery life	MobileMark® 2014: 11.5 hr
WLAN + Bluetooth™	One of the following, con • Realtek® RTL8822B • Intel Wireless-AC 92	3E, Wi-Fi 2x2 80	2.11ac + Blu				d	AC adapter Operating system	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN	None							Limited warranty	1-year depot repair service
SIM card	None							Mil-Spec test	MIL-STD-810G military testing
								Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo September 2019













ThinkPad E495 Platform Specifications

Processor	AMD Ryze	n™ Mo	bile Pro	cessors w	th Radeon	[™] Vega G	raphics			Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Controlle	er	Processor Graphics	Weight	PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm Starting at 3.87 lb / 1.75 kg Black
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3		Ra	adeon Vega 3 Graphics	Case color Case material	Biack Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
	Ryzen 5 3500U	,	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-24	00 Ra	adeon Vega 8 Graphics	Smart card reade	erNone
	Ryzen 7 3700U	4	0	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Rad	deon RX Vega 10 Graphics	Media reader Ports	MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
Graphics	AMD Rade supports e supports d Max resolu	xterna ual in	aľ digital depende	monitor via ent display:	a HDMI or I	JSB Type	e-C;	•	z (HDMI)	Monitor cable Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None
Chipset Memory	AMD SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM * 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, 1.5W x 2, Dolby® Advanced Audio /
Display	Size / Resol	lution	ution Surface Type Brightness Aspect Contrast Viewing Ratio Ratio Angle Mult						Multi-touch		dual array microphone, headphone / microphone combo jack
	14.0" HD (1			nti-glare TN		16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	14.0" FHD ((1920x	1080) Ar	nti-glare IP:	3 250 nits	16:9	600:1	170°	Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole
Multi-touch	None									Security chip	Discrete TPM 2.0, TCG Certified
Storage	Up to two dr • HDD / SA					Active Pro	ntection Sy	/stem	тм	Fingerprint reade	rNone None
Optical	• M.2 2242 • M.2 2280 None	SSD	/ PCle	NVMe, PC	e 3.0 x 2 o			,0.0		Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr
Ethernet	Gigabit Eth	nernet	Conne	ction, Realt	ek R81110	iUS					* Battery life varies significantly with settings, usage, & other factors
WLAN +	One of the									AC adapter	45W or 65W USB Type-C AC adapter
Bluetooth™	Realtek®Intel Wire	RTL8	822BE,	Wi-Fi 2x2	302.11ac +	Bluetoot	h 4.2, M.2	card	4	- · · · · · · · · · · · · · · · · · ·	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
WWAN	None	1622-7	AC 9200), VVI-FI ZXZ	002.11ac	+ Diueloc	DITI 5.0, IVI	.Z Care	u	Limited warranty	 1-year mail-in repair service 1-year depot repair service
SIM card	None									Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo December 2019





ThinkPad E580 Platform Specifications

Processor	7th 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	Intel UD Graphica			 Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows OS 						
	i3-7130U i5-7200U	2	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB	DDR4-2133	620	WWAN SIM card	None None	
	8th Genera	ation In	itel Core	i3 / i5 / i7 F	Processor				Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.95mm	
			# of Threads	Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver	
	i3-8130U i5-8250U	2	8	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics 620	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic	
	i7-8550U * i3-7130U is	s NOT a	available ii	1.8 GHz	4.0 GHz 1FA	8MB			Smart card reader Media reader	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,		Power-on password, hard disk password, supervisor password, security keyhole t)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified	
	None								vPro Fingerprint reader	None r Optional: Touch style fingerprint reader on the palm rest	
Storage	Up to 2 drive Some: HD					able. ur	ogradable.		NFČ .	None	
		tive Pro	otection S	System™	,	, -,	3 ,		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter	
Optane™ memory	Optional: 1				e NVMe, P	Cle 3.0) x 2		Max battery life	MobileMark® 2014: 12.23 hr *Battery life varies significantly with settings, usage, & other factors	
	None Gigabit Eth	a rnat	Cannaat	ion Doolto	- D011101	ıc			AC adapter	45W or 65W USB Type-C AC adapter	
Ememer	Gigabit Eti	iemet	Connect	ion, Realte	KHOIIIGU	15			Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
										One of the following, configurable by model: 1-year mail-in repair service 1-year depot repair service	
									Mil-Spec test	MIL-STD-810G military testing	
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	

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

Lenovo August 2019

















ThinkPad E590 Platform Specifications

Processor	8th Generation Intel®	® Core	™ i3 / i5 / i	7 Processo	r				Dimensions	<i>WxDxH:</i> 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm		
	Number Cores Thr		Frequency	Frequency	Cache	Memory Types		Processor Graphics	Weight Case color Case material	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;		
	i5-8265LI	8	2.1 GHz 1.6 GHz 1.8 GHz	3.9 GHz 3.9 GHz 4.6 GHz	4MB 6MB 8MB	DDR4-24	00 Intel	UHD Graphics 620	Smart card reade Media reader	Bottom: PC/ABS plastic rNone MicroSD card reader		
Graphics	Intel UHD Graphics 6 Intel UHD Graphics 6 AMD Radeon RX 55 supports external dig supports dual indepe Max resolution: 4096	620 in 60X Gr gital m endent 6x230	processor raphics, 2G conitor via H t display; 4@60Hz (l	and B GDDR5 HDMI or US	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 DisplayPor 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 spe None None		
Chipset Memory	Intel SoC (System or 32GB max / 2400MH * Installed memory is ac	Hz DDI	Ŕ4, dual-ch						Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /		
Display	Size / Resolution	Surf	face Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Multi-touch		dual array microphone, headphone / microphone combo jack		
	15.6" HD (1366x768)		glare TN	220 nits	16:9	400:1	90°	Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
Multi-touch	15.6" FHD (1920x1080) None)) Anti-	glare IPS	250 nits	16:9	600:1	170°	Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified		
Storage	Up to two drives (one M • HDD / SATA 6.0Gb • M.2 2280 SSD / SA • M.2 2242 SSD / PO	o/s, 2.5 ATA 6.0	5" wide, 7m 0Gb/s	m high, Ac	tive Pr	otection S	System™	тм	System Mgt	Discrete model: firmware TPM 2.0 integrated in chipset None r Optional: Touch style fingerprint reader on the palm rest None		
Optane™ memor	 M.2 2280 SSD / PC * Installed M.2 2280 SS ry Optional: Intel Optar None 	SD is Po	Cle Śx4 but i	run at PCIe			SD adapi	ter limitation	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 11 hr * Battery life varies significantly with settings, usage, & other factors		
Ethernet	Gigabit Ethernet Cor	nnectio	on, Realtek	R8111GL	JS				AC adapter	45W or 65W USB Type-C AC adapter		
WLAN +	One of the following, co								Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64		
Bluetooth™	 Realtek® RTL88228 Intel Wireless-AC 9 	BE, W 9260, V	/ı-Fi 2x2 80 Mi-Fi 2x2 8	2.11ac + B 02.11ac +	luetoo Blueto	th 4.2, M. oth 5.0, N	2 card 1.2 card	<u></u>	Limited warranty	One of the following, configurable by model: 1-year mail-in repair service		
WWAN	None									1-year depot repair service		
SIM card	None								Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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

Lenovo August 2019













ThinkPad E595 Platform Specifications

Processor # of Number Cores Thread	Base Max Turbo	0 1	N.4		Dimensions WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.9mm							
Byzen 3	s Frequency Frequency	Cache	Memory	Processor	Weight Case color	Starting at 4.7 lb / 2.1 kg Black						
INVZEII 3 I a I a	1 1 1	1MB L2	Controller		Coop motorial	Display cover: Aluminum;						
3200U 2 4	2.6 GHz 3.5 GHz	4MB L3		Radeon Vega Graphics	3	Bottom: PC/ABS plastic						
Ryzen 5 3500U 4 8	2.1 GHz 3.7 GHz	2MB L2 / 4MB L3	DDR4-240	Padaan Vaga	Media reader	MicroSD card reader						
Ryzen 7 4 0 3700U	2.3 GHz 4.0 GHz	2MB L2 / 4MB L3		Radeon RX Ve 10 Graphics	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,						
Graphics AMD Radeon Vega 3, supports external digits supports dual independent Max resolution: 3840x	ıl monitor via HDMI or lent display;	USB Type	e-C;		Monitor cable Bundled Accy HDMI 1.40, Ethernet (RJ-45), fleadpriorie 7 micropriorie combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical security with the security security seyhole * Depending on many factors, actual data transfer speed may be lower than theoretical security seyhole * None							
Chipset AMD SoC (System on 32GB max / 2400MHz * Installed memory is actu	DDR4, dual-channel c	400MHz d	ue to AMD li	mitation	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack						
	Surface Type Brightne	Ratio		ingle Multi-touc	— I IltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
	Anti-glare TN 220 nits			90° Non-touc	Coourity	Power-on password, hard disk password, supervisor password, security keyhole						
[15.6" FHD (1920x1080)]	Inti-glare IPS 250 nits	16:9	600:1	170° Non-touc	Security chip Discrete TPM 2.0, TCG Certified							
Multi-touch None	000 / //00)				Fingerprint reade	er None None						
Storage Up to two drives (one M.2 • HDD / SATA 6.0Gb/s		Active Pro	ntection Sv	stem™								
 M.2 2242 SSD / PCI6 	NVMe, PCIe 3.0 x 2			3.0111	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter						
M.2 2280 SSD / PCIe Optical None	NVMe, PCIe 3.0 x 4				Max battery life	MobileMark® 2014: 10.3 hr						
1 110.10	odine Dooled Dodge	2110			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter						
Ethernet Gigabit Ethernet Conn		305				n Optional: Windows® 10 Home 64 or Windows 10 Pro 64						
WLAN + One of the following, constitution ■ Realtek® RTL8822BE	Mi Ei 2v2 902 1120	Bluetoot	h 1 2 M 2	oard		·						
• Intel Wireless-AC 926	0, Wi-Fi 2x2 802.11ac	+ Bluetoo	oth 5.0, M.2	card 2 card	Limited warranty	1-year mail-in repair service						
WWAN None			·		<u> </u>	1-year depot repair service						
SIM card None					Mil-Spec test	MIL-STD-810G military testing						
					Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant						

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

Lenovo November 2019

















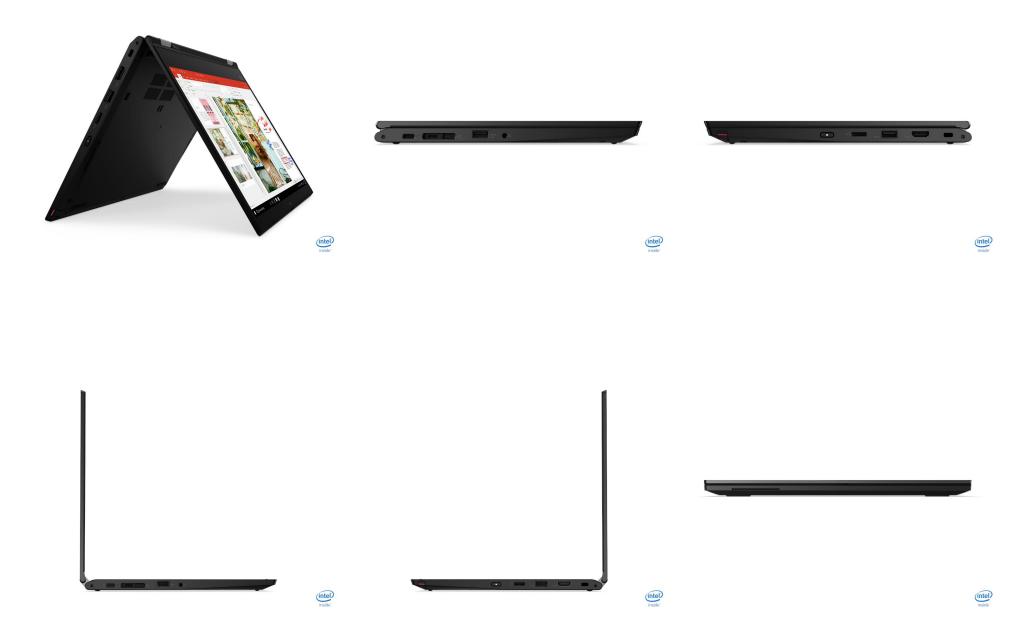


ThinkPad L13 Platform Specifications

Processor	10th (Generation	Intel® (Core™ i3	/ i5 / i	7 Processor					er Optional: Smart card reader
	Number Cores Threads Frequency Frequency Cache Types Graphics									Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i3-101 i5-102 i7-105	10U ₄	8	2.1 G 1.6 G 1.8 G	Hz	4.2 GHz 6	MB DI MB	DR4-2666 Intel UHD	Graphics		HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole
Graphics	suppo	rts three in	ıl digita ıdepen	l monitor dent disc	via H	DMI or USB JSB Type-C)	,,	C; x2160@30Hz (HD	MI)	Monitor cable (optional)	 * Depending on many factors, actual data transfer speed may be lower than theoretical spee Lenovo USB-C to VGA Adapter Lenovo USB-C to DisplayPort Adapter Lenovo HDMI to VGA Monitor Adapter
Chipset Memory	Intel S 4GB,	SoC (Syster 8GB, or 160	m on C GB / 2	hip) plat 666MHz	orm DDR4	1 / soldered	to syste	emboard, no socke	ts	Bundled Accessories	Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2m
Display	Size	Resolution		Surface	Туре	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	(optional)	Lenovo USB-C to Ethernet Adapter ThinkPad Ethernet Extension Adapter Gen 2
	13.3"	HD (1366x76	68)	Anti-glare	TN	250 nits	16:9	500:1	90°	Camera	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
	13.3" FHD (1920x1080) Anti-glare IPS 250 nits (non-touch) 300 nits (multi-touch) 16:9 800:1 (non-touch) 700:1 (multi-touch) 170°									Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
	_		<u> </u>			ure (FHD or	ıly)			 Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight
Storage		f the following 2242 SSD								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Optical	M.2Inte	2280 SSD	/ PCIe Memo	NVMe, y H10 w	PCIe 3		rage,			Security Security chip System Mgt (opt) Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest
Ethernet	RJ45	connector v	via opt	ional Thii	าkPad	-V (<i>Non-vPr</i> Ethernet Ex	o) or I2 ktensio	19-LM (<i>vPro</i>), n Adapter Gen 2 o	r	Battery	None Integrated Li-ion 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
WLAN + Bluetooth™	One o		ving, co	<i>nfigurab</i> 0, Wi-Fi	le by r 2x2 80)2.11ac + Bl		1 5.0, M.2 card		Max battery life AC adapter	MobileMark® 2014: 14.1 hr *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
WWAN SIM card	• Intel None None	Wi-Fi 6 AX	(201, V	Vi-Fi 2x2	802.1	1ax + Blueto	ooth 5.0), M.2 card		(optional)	• Windows® 10 Home 64 • Windows 10 Pro 64 • Windows 10 Pro in S mode
Dimensions Weight Case color Case material	WxDxH: 12.26" x 8.62" x 0.69"; 311.5mm x 219mm x 17.6mm Starting at 3.06 lb / 1.38 kg Black or Silver Display cover: Aluminum Bottom: GFRP									1	 1-year depot repair service 1-year depot with 2-year system board repair service 1-year limited onsite service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
Note: The specifics		h a a ma a m		ن ملطمانون	مبر الم						Lenovo

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

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ThinkPad L13 Yoga Platform Specifications

Processor # of Number Cores Threads Frequency Frequency Frequenc	
i5-10210U 4 8 1.6 GHz 4.2 GHz 6MB DDR4-2666 Intel UHD Graphics optional smart card reader, microSD card reader, side docking security keyhole	hone combo jack,
Graphics Intel UHD Graphics 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) * Depending on many factors, actual data transfer speed may be lower to be leaved used to the control of the contro	than theoretical speed
Chipset Intel SoC (System on Chip) platform Memory 4GB, 8GB, or 16GB / 2666MHz DDR4 / soldered to systemboard, no sockets Bundled Accessories Lenovo USB-C to USB-	
Display Size Resolution Type Surface Brightness Ratio Rati	
13.3" FHD (1920x1080) IPS Anti- reflection 300 nits 16:9 800:1 72% 170° Camera One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focu	IS
Multi-touch Capacitive-type multi-touch, supports 10-finger gesture, anti-reflection (AR), could reduce the brightness by up to 10% Yoga hinge, 360 degree Convert-mode Pen Capacitive-type multi-touch, supports 10-finger gesture, anti-reflection (AR), could reduce the brightness by up to 10% Yoga hinge, 360 degree Laptop, tent, stand and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	model only)
Storage One of the following, configurable by model: Keyboard Gerow, spill-resistant, multimedia Fn keys, optional LED backlig UltraNav™ TrackPoint® pointing device and buttonless Mylar surface touch	
 M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCIe NVMe 3.0 x 4 Optical None Security chip Security chip System Mgt (opt) Intel vPro Technology Fingerprint reader on the palm rest NFC None	, security keyhole
Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro), RJ45 connector via optional Adapter Legon LISR-C to Ethernet Adapter Battery Integrated Li-ion 46Wh battery, supports Rapid Charge (charge with 65W AC adapter)	e up to 80% in 1hr)
WLAN + Bluetooth™ Bluetooth	
• Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card WWAN None SIM card None • Intel Wi-Fi 6 AX201, Wi-Fi 2x2 802.11ax + Bluetooth 5.0, M.2 card Light sensor	
Dimensions WxDxH: 12.26" x 8.62" x 0.69"; 311.5mm x 219mm x 17.6mm Weight Starting at 3.17lb / 1.43kg Case color Black or Silver Operating system • Windows® 10 Home 64 (optional) • Windows 10 Pro 64 • Windows 10 Pro in S mode	
Case material Display cover: Bottom: Magnesium / Aluminum GFRP Limited warranty (optional) 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service	
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

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

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ThinkPad L380 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions	WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm
	Processor Number	# of	# of	Base Frequency	Max Turbo	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 3.22 lb / 1.46 kg Black or Silver Display cover: Aluminum Bottom: GFRP
		Cores					Types	Intel HD Graphics	Case material	
	Cel 3965U		2	2.2 GHz	-	2MB		610	Smart card reade	
	i3-7020U	2		2.3 GHz	-		DDR4-2133	Intel HD Graphics	Media reader	MicroSD card reader
	i3-7130U i5-7200U		4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB 3MB		620	Ports	Two USB 3.1 Gen 1 (one Always On), 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,
	8th Genera	ation Ir	ntel Core			02		l.		
	Processor # of # of Base Max Turbo Cache Types Craphia									microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Number	Cores		Frequency	Frequency		Types	Graphics	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	i3-8130U i5-8250U	2	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB		Intel UHD Graphics	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	i5-8350U	4	8	1.7 GHz	3.6 GHz	6MB	DDR4-2400	620	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable
	i7-8550U			1.8 GHz	4.0 GHz	8MB			Camera	HD720p camera, fixed focus
Graphics	Intel HD G	raphic	s 610, 62	20 or Intel U	JHD Graph	ics 620	in process	or;	Audio support	HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /
	supports external digital monitor via HDMI or USB Type-C; supports three independent displays;									dual array microphone, headphone / microphone combo jack
-	Max resolu	tion: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchoad, multi-touch
Chipset Memory	Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets								Security	Power-on password, hard disk password, supervisor password, security keyhole
	* System clocks down for processors with lower memory controller								Security chip	Discrete TPM 2.0, TCG Certified
Display	Some: 13	3.3" (3	38mm) H	D (1366x7	68), anti-gl	are, LE	D backlight	,	vPro (optional)	Intel vPro Technology r Optional: Touch style fingerprint reader on the keyboard bezel,
								ıht, IPS,		anti-spoofing technology
Multi touch (ont)	Some: 13.3" (338mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle on-cell touch, supports 10-finger gesture							ing angle	NFC (optional)	Near Field Communication
Multi-touch (opt) Storage	One of the f		<u> </u>						Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Storage	 M.2 SSE) / SAT	A 6.0Gb/	s (e.g. xxx	GB SSD M	.2)			Max battery life	MobileMark® 2014: 16.1 hr
Optical	M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (é.g. xxxGB SSD M.2 PCIe NVMe None							M.2 PCIe NVMe)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>)								Operating system	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Linomot	via optional ThinkPad Ethernet Extension Cable								Limited warranty	One of the following, configurable by model:
WLAN +	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card							h 4.1, M.2 card		 1-year depot repair service 3-year/1-yr battery depot repair service
Bluetooth™ WWAN	* Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS									3-year/1-yr battery limited onsite service
SIM card	None None								Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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

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ThinkPad L380 Yoga Platform Specifications

Processor	7th Generation Intel® Core™ i3 / i5 Processor									<i>WxDxH:</i> 12.67" x 8.82" x 0.74"; 322mm x 224.2mm x 18.8mm	
	Processor	# of	# of		Max Turbo	Cache	Memory	Processor	Weight Case color	Starting at 3.44 lb / 1.56 kg Black or Silver Display cover: Aluminum	
	Number i3-7020U	Cores	Threads	Frequency 2.3 GHz	Frequency	3MB	Types	Graphics	Case material		
	i3-7020U	2	4	2.3 GHz 2.7 GHz	-	3MB	DDR4-2133	Intel HD Graphics		Bottom: GFRP	
	i5-71300	_	+	2.7 GHz	3.1 GHz	3MB	DDN4-2133	620	Smart card reade		
	8th Genera	ation Ir	ntel Core			OIVID		<u> </u>	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),	
	Processor # of # of Base Max Turbo Cooks Memory Processor									two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack	
	Number	Cores	_	Frequency			Types	Graphics		microSD card reader, security keyhole	
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB				* Depending on many factors, actual data transfer speed may be lower than theoretical speed	
	i5-8250U			1.6 GHz	3.4 GHz	6MB	DDR4-2400	Intel UHD Graphics	Monitor cable (optional)	HDMI to VGA: Lénovo HDMI to VGA Monitor Adaptér USB-C to VGA: Lenovo USB-C to VGA Adapter	
	i5-8350U i7-8550U	4	8	1.7 GHz 1.8 GHz	3.6 GHz 4.0 GHz	6MB 8MB		620	(орионаі)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter	
Graphics		ranhic	s 620 or		Graphics 6		oceseor.		Camera	720p: HD720p resolution, low light sensitive, fixed focus	
Ciapilios	supports e									IR & 720p: IR camera and HD720p camera, fixed focus World facing: Rear camera, 5MP resolution, auto focus	
	supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)						96x2160@3	30Hz (HDMI)	Audio support	HD Audio, Realtek ALC3287 codec, Dolby® Advance / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack	
Chipset	Intel SoC (System on Chip) platform								Keyboard	6-row, multimedia Fn keys, optional LED backlight	
Memory	Up to 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets								UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch	
					with lower	r memo	ry controlle	er	Security Power-on password, hard disk password, supervisor password, security keyho Discrete TPM 2.0. TCG Certified		
Display					ED backligl					Intel vPro Technology	
Multi taurala (aust)								iti-reflection)	Fingerprint readé	er <i>Optional:</i> Touch style fingerprint reader on the keyboard bezel, anti-spoofing technology Near Field Communication	
Multi-touch (opt) Hinge	Yoga hinge			n, AR (ant	i-reflection)	, suppo	orts 10-finge	er gesture	NFC (optional)		
Convert-mode	Laptop, ter	nt, star	nd, yoga a	and tablet							
Pen						splay, c	n-board ga	rage	Battery	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter	
Storage	One of the following, configurable by model:								Max battery life	MobileMark® 2014: 12.85 hrs	
	 M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe 							M.2 PCIe NVMe)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	
Optical	None							,	Preload	Optional: Windows® 10 Home 64 or Windows 10 Pro 64	
Ethernet							1219-LM (v	(Pro))	Limited warranty	One of the following, configurable by model:	
WLAN +	via optional ThinkPad Ethernet Extension Cable Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card								,	1-year depot repair service	
Bluetooth™	* Wireless card supports BT4.2 but is limited to BT4.1 by Windows OS									 1-year depot with 2-year system board service 3-year/1-yr battery depot repair service 	
WWAN	None									3-year/1-yr battery limited onsite service	
SIM card	None								Mil-Spec test	MIL-STD-810G military testing	
									Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant	
									•	Langua	

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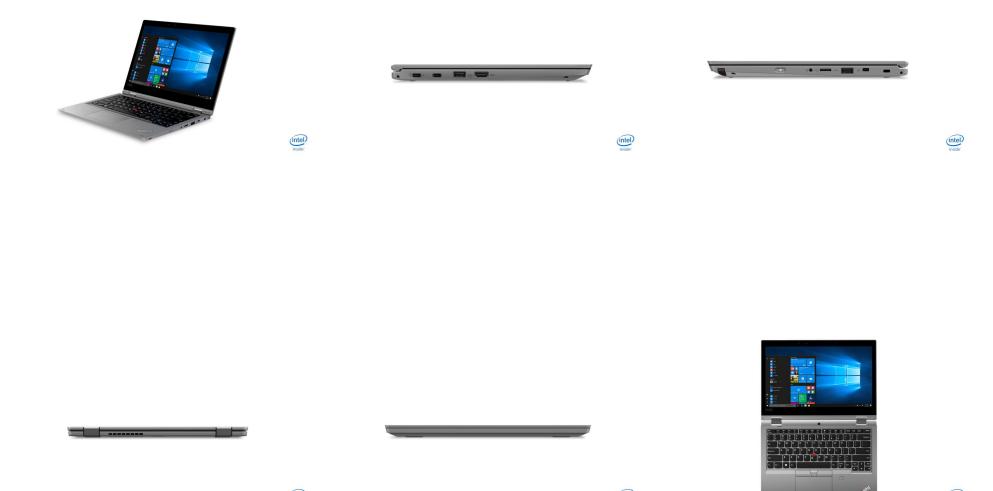






ThinkPad L390 Platform Specifications

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-C 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	Graph externa	ics 610 Il digital	or 620 ir monitor ent disp	processor; via HDMI or avs:	USB Typ	pe-C; 196x2160@3	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		x / 2400	0MHz D	DŔ4, du	al-channel c	400MHz	wo DDR4 S 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		Size Resolution Surface Type Brightness Aspect Ratio Contrast Ratio (13.3" HD (1366x768) Anti-glare TN 250 nits 16:9 500:1							Viewing Angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
		700tf (non tough)					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	WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm Starting at 3.22 lb / 1.46 kg Black or Silver Display cover: Aluminum Bottom: GFRP									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	2	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		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	HD (1920x	1080) IF	S Anti- reflection	300 nits			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 (Al uld reduce the brightness by up to 10% ga hinge, 360 degree							ction (AR)	,		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					Wi-Fi + Blu						n Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WWAN SIM card	None	None None WxDxH: 12.67" x 8.83" x 0.74"; 321.8mm x 224.2mm x 18.8mm									Limited warranty	 1-year depot repair service 1-year depot with 2-year system board repair service
Dimensions Weight	WxDxF Starting Black o	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	cov	er: N	/lagnesiu	m / Alumin	um					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® Celeron® F	Processo	r, 7th Gener	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor # of Number Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Wireless WAN upgradable Integrated Mobile Broadband 4G LTE,
	Cel 3965U	2	2.2 GHz	-	2MB		Intel HD Graphics 610		Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card
	i3-7020U i3-7130U i5-7200U	4	2.3 GHz 2.7 GHz 2.5 GHz	- - 3.1 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics 620	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		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
	8th Generation I	ntel Core	i3 / i5 / i7 F	rocessor				Case color Case material	Black PC/ABS plastic
	Processor # of Number Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Smart card reade	er Optional: Smart card reader
	i3-8130U 2	4	2.2 GHz	3.4 GHz	4MB	.,,,,,,	Grapinos	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8250U i5-8350U i7-8550U	8	1.6 GHz 1.7 GHz 1.8 GHz	3.4 GHz 3.6 GHz 4.0 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	Forts	two USB 3.1 Ten T (offe Aways Off), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
	* i3-7130U is NOT	available i			OIVID			-	microSD card reader, side docking connector, security keyhole
Graphics	Intel HD Graphic Intel HD Graphic	s 620 or	Intel UHD (Graphics 62				Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	(discrete models supports externa supports three in	n 530, 2GB GDDR5 memory dels are NOT available in EMEA); ernal digital monitor via HDMI or USB Type-C; e independent displays; en: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI					OHz (HDMI)	Camera (optional) Audio support	I) One of the following, configurable by model: • HD720p camera, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ /
Chipset Memory	Intel SoC (Systel 32GB max / 240	m on Chi 0MHz DI	ip) platform DR4. dual-c	hannel cap	able. tv	wo DDR4 S	O-DIMM sockets	<u> </u>	dual array microphone, headphone / microphone combo jack
	* System clocks do	own for pro	cessors with	lower memo	ry conti	roller		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	Some: 14.0" (35 250 nits,	, 16:9 asr 55mm) Fl , 16:9 asr	pect ratio, 50 HD (1920x1 pect ratio, 80	00:1 contra 080), anti- 00:1 contra	st ratio glare, L st ratio	ED backlig	ht, IPS,	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the keyboard bezel,
Multi-touch (opt) Storage	On-cell touch, su System has one Hi	• •				ctorago		1	anti-spoofing technology
Storage	Some: HDD/S	ATA 6.00	ab/s, 2.5" wi	ide, 7mm h	igh, Ac	tive Protect		NFC (optional) Battery	Near Field Communication Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Some: SSD / S. Some: M.2 SSE Some: 128GB	D / PCIe I M.2 SSD	NVMe, PCIe / PCIe NVN	e 3.0 x 2, 1 lle, PCle 3.	6Gb/s 0 x 2,	16Gb/s,	,	Max battery life	with 65W AC adapter MobileMark® 2014: 12.2 hr * Battery life varies significantly with settings, usage, & other factors
Optical	None In www.	in siot as	2nd Storag	e, mutually	exclus	sive with vvv	VAIN	AC adapter	45W or 65W USB Type-C AC adapter
Ethernet	Non-vPro model vPro model:	l: Intel Eth	nernet Conr	nection I219	9-V (Ja 9-LM (J	cksonville) Jacksonville)	Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WLAN + Bluetooth™ (optional)	One of the following • Realtek® RTL8	One of the following, configurable by model: Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (US onlined Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2					card (US only)	(optional)	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
. , ,	* Intel 8265ac card						,	Mil-Spec test	MIL-STD-810G military testing
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant



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	WxDxH: 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types		ocessor raphics	Weight Case color Case material	Starting at 3.72 lb / 1.69 kg Black PC/ABS plastic
	Cel 4305U	2	2	2.2 GHz	-	2MB	DDR4-2133		HD Graphics 610	Smart card reade	r Optional: Smart card reader
	i3-8145U i5-8265U	2	8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB				Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8365U	4	8	1.6 GHz	4.1 GHz	6MB	DDR4-2400	1	HD Graphics 620	1	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 HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None One of the following, configurable by model:
Chipset Memory	Intel SoC 64GB max * Installed r	(Syste k / 240 memory	m on Chi 0MHz D[· is actually	p) platform DR4, dual-c / 2666MHz b	hannel cap ut run at 213	able, t	wo DDR4 S or 2400MHz o	O-DIMI	M sockets tel limitation	1 ''	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec /
Display	Size Resolution Type Surface Brightness Aspect Contrast Color Ratio Gamul 14.0" HD (1366x768) TN Anti-glare 220 nits 16:9 500:1 45%										stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
				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)	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
Optane™ memory	* Installed I	N.2 228	0 SSD is I	PCIe 3x4 but	run at PCIe	<i>3x2 due</i> Cle 3.0	e to M.2 SSD) x 2	adapter	limitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
Optical Ethernet	Non-vPro			nernet Conr						Max battery life AC adapter	MobileMark® 2014: 12 hr * Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
WLAN +	VPro mod			rable by mod		9-LIVI (Jacksonville	·)		Operating system	Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (optional)	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card (NOT available in EMEA) Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0 							card		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
			,			etooth	5.0			Mil-Spec test	MIL-STD-810G military testing
WWAN (optional)	 Wireless WAN upgradable (special bid only in EMEA) Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA or Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable 								IEA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
SIM card Note: The specifica	None	movin	not be ave	ilable in all r	ogione					<u> </u>	Lenov



ThinkPad L580 Platform Specifications

Processor	Intel® Celeron® Processor	r, 7th Generation Intel Core™ iເ	3 / 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 (special bid only) 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	DR4-2133		CIM pard (ant)	* For non-WWAN model, it means the model is NOT WWAN upgradable
	i3-7130U 2 4	2.7 GHz - 3MB L 2.5 GHz 3.1 GHz 3MB		Intel HD Graphics 620	SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7300U	2.6 GHz 3.5 GHz 3MB		020	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 Generation Intel Core	i3 / i5 / i7 Processor		,	Case color Case material	Black PC/ABS plastic
	Processor # of # of	Base Max Turbo Cache	Memory	Processor	ExpressCard	None
	Number Cores Threads i3-8130U 2 4	Frequency Frequency 2.2 GHz 3.4 GHz 4MB	Types	Graphics	Smart card reade	er Optional: Smart card reader
	i5-8250U	1.6 GHz 3.4 GHz 6MB	DD 4 0 400	Intel UHD Graphics	Media reader	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8350U 4 8	1.7 GHz 3.6 GHz 6MB	DR4-2400	620	1 0113	two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i7-8550U	1.8 GHz 4.0 GHz 8MB			-	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,
Graphics	* i3-7130U is NOT available in	n US and ЕМЕА 20 or Intel UHD Graphics 620 i	n proces	or only or	-	microSD card reader, side docking connector, security keyhole
Graphics	Intel HD Graphics 620 or	Intel UHD Graphics 620 in pro	cessor an	d drilly di	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
	AMD Radeon 530, 2GB G (discrete models are NOT				(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter
	supports external digital m	nonitor via HDMI or USB Type-	·C;		Camera (optional) Audio support)HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec /
	supports three independe	ent displays; 04@60Hz (USB Type-C); 4096	sv2160 <i>@′</i>	ROHz (HDMI)	Addio support	stereo speakers, 2W x 2, Dolby® Audio™ /
Chipset	Intel SoC (System on Chi		JAZ 100 @ (DOLIZ (LIDIVII)	1	dual array microphone, headphone / microphone combo jack
Memory	32GB max / 2400MHz DD	DR4, dual-channel capable, two pocessors with lower memory control	DDR4 S ller	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		D (1366x768), anti-glare, LED	backlight,		Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
	220 nits, 16:9 asp Some: 15.6" (396mm) FF	pect ratio, 500:1 contrast ratio HD (1920x1080), anti-glare, LE	D backlig	ht, IPS,	vPro (optional)	Intel vPro Technology
Multi touch	250 nits, 16:9 asp	pect ratio, 800:1 contrast ratio,	170° view	ing angle	Fingerprint reade	r Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Multi-touch Storage	None System has one HDD slot or	one M.2 2280 slot exclusively for s	torage		NFC (optional)	Near Field Communication
Storage	Some: HDD / SATA 6.0G	ab/s, 2.5" wide, 7mm high, Activ	ve Protect		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
		ib/s, 2.5" wide, 7mm high (e.g. NVMe, PCIe 3.0 x 2, 16Gb/s	xxxGB SS	SD)	Max battery life	With 65W AC adapter MobileMark® 2014: 12 hr
	Some: 128GB M.2 SSD	/ PCIe NVMe, PCIe 3.0 x 2, 16			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optical	in WWAN slot as a	2nd Storage, mutually exclusive	e with WV	VAN	<u> </u>	a Optional: Windows® 10 Home 64 or Windows 10 Pro 64
Ethernet		nernet Connection I219-V (Jack	(sonville)			· ·
	vPro model: Intel Eth	nernet Connection I219-LM (Ja)		1-year depot repair service
WLAN + Bluetooth™		Vi-Fi 2x2 802.11ac + Bluetooth				 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
(optional)	 Intel Dual Band Wireless 	s-AC 8265, Wi-Fi 2x2 802.11ac BT4.2 but is limited to BT4.1 by Wi	+ Blueto		Mil-Spec test	MIL-STD-810G military testing
	imei ozobac caru supports i	DIT. 2 DULIS IIIIIIICU IO DIT. I DY WII	IUUWS US		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The speci	fications above may not be avai	ilable in all regions				enovo



ThinkPad L590 Platform Specifications

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



ThinkPad P1 Platform Specifications

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

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

Lenovo November 2019













ThinkPad P1 (2nd Gen) Platform Specifications

Processor	9th G	enera	tion Ir	ntel® Coi	e™ i5 /	/ i7 / i9 F	Processo	r or In	itel Xe	on® E P	rocesso	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Proces		# of Cores	# of Threads			lax Turbo requency	Cache		mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg;
	i5-940		4	8	+ -		4.3 GHz	8MB			оа.р.		Case color	Multi-touch model: starting at 4.0 lb / 1.81 kg Black paint (FHD model) or black weave (UHD model)
	i7-975	60H	6	12	2.6		4.5 GHz	12MB		In	tel UHD (Graphics	Case color Case material	Display cover: CFRP/GFRP hybrid;
	i7-985		6	12	+		4.6 GHz	12MB		4-2666	630	0		Bottom: Aluminum alloy
	i9-988	OH	8	16	2.3	GHz 4	4.8 GHz	16MB		_				er Optional: Smart card reader
	E-227	6M	6	12	2.8	GHz 4	4.7 GHz	12MB	1	In	tel UHD (P63		Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3
Graphics	Intel U NVIDI suppo suppo	JHD @ IA® Qu orts ex orts fo	araph ladro terna ur ind	T1000 I digital ependei	or P63 or T20 monito nt disp	30 in pro 000, 4G or via HI olays;	only or ocessor a B GDDR DMI or TI olt); 4K@	5 mer nunde	rboĺt [™] ;				Monitor cable (optional)	(with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack, optional smart card reader, SD card reader, security keyhole *Power Delivery only supports power-out for charging peripherals *Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Chipset	Mobile	e Intel	CM2	46 Chip	set]` ′ ′	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
Memory	64GB	max	/ 2666	3MHz D	DR4, I	ECC or	non-ECC	(ECC	C func	tion sup	oorted o	nly on	Bundled Accy	
D: 1	xeon	proce	ssor)	, duai-cr	annei	capable	e, two DI						a ' ' '	One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Display	Size	Resolu	tion		Туре	Surface	Bright		Aspect Ratio	Contrast Ratio	Gamut	Viewing Angle	Audio support	IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec /
	15.6"	FHD (1	920x1	1080)	IPS	Anti-glar	e 300 r	nits	16:9	700:1	72% NTSC	170°] radio support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array far-field microphone, headphone / microphone combo jack,
	15.6"	FHD (1 Dolby \	920x1 √ision	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	מ אטח	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	RAID None		uppor	t									AC adapter	135W slim tip AC adapter
Ethernet	Native	e Intel	Ethe	rnet Cor	nectio	on I219-	V (<i>Non-</i> v	Pro) c	or I219	-LM (vF	?ro))		Operating system	on One of the following, configurable by model: Windows® 10 Home 64
WLAN (optional)										•			-	 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
							i-Fi + Blu			bo adapt	er		Limited warranty	One of the following, configurable by model:
WWAN SIM card	None None													 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
													Mil-Spec test	MIL-STD-810G military testing
													Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P43s Platform Specifications

Processor	8th G	eneratio	n Intel® C	ore™	i7 Proce	ssor					Dimensions	WxDxH:		70"; 329mm x 227		
	Proces					Max Turbo	Cache	Memory	Proce		Weight	Models	FHD	FHD Low Power	WQHD	
	Numb		es Threa	_		rrequency		Types	Grap	hics	-	Weight	3.43 lb / 1.55 kg	3.28 lb / 1.49 kg	3.24 lb / 1.47 kg	
	i5-836		8	_	.6 GHz		6MB 8MB D	DR4-2400 In	tel UHD	Graphics	Case color Case material	Black	over: PPS / 50% GF	:.		
	i7-866		"		.9 GHz		8MB	DN4-2400	62	0	Case material	Bottom:	PA / 50% GF	,		
Graphics			nhice 62) in n	rocessor	and							Smart card reader			
Graphics	NVID	A Quadr	o® P520	2GB	GDDR5	memory;					Media reader		card reader	0>		
	suppo	rts exter	nal digita	al mo	nitor via F	HDMI or USI	B Type-	·C;			Ports	one USB	3.1 Gen 1 (one Alwa 3.1 Type-C Gen 1 (w	ith the function of Po	wer Delivery and Dis	splayPort).
	suppo Max r	rts three esolutior	: indeper i: 3840x	ident 2160	displays; @60Hz (l	JSB-C); 38-	40x216	60@30Hz (H	DMI)			one USB	3.1 Type-C Gen 2 / T	hunderbolt 3 (with the	ne function of PD and	DP),
Chipset	Intel S	SoC (Sys	tem on 0	Chip)	platform			(1	headphon	b, Ethernet (RJ-45), le / microphone com	bo jack, optional sm	art card reader.	
Memory	48GB	max / 2	400MHz	DĎŔ	4, dual-ch	nannel capa		D 4 00 DIA	48.41			microSD o	card reader, side doo	king connector, seco	urity keyhole may be lower than theor	
	* Insta	or 16GB lled memo	memory orv is actu	soide ally 26	erea to sy 666MHz bu	stemboard, ut run at 2400	one טו MHz du	e to Intel limita	IIVI SOCK ation	Ket	Monitor cable	HDMI to V	g on many tactors, actu /GA:	iai data transter speed i II to VGA Monitor Ad	<i>nay be lower than theor</i> anter	eticai speed
Display							Aspect		,	Viewing	(optional)	USB-C to	VGA: Lenovo USB	-C to VGA Adapter	apto.	
	Size	Resolution	1	Туре	Surface		Ratio	Ratio		Angle	1		HDMI: Lenovo USB DP: Lenovo USB		anter	
						250 nits (non-touch)			1		Bundled Accy	None	27. 2011010 002	o to Biopiayi oi titta	артог	
	14.0"	FHD (192	0x1080)	IPS	Anti-glare	300 nits	16:9	700:1	45%	170°	Camera (optional		following, configurable			
		FHD (192	0v1080)			(multi-touch)	1				4		camera with ThinkS		cy, fixed focus er camera privacy, fixe	ad facus
	14.0"	Low Powe		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Audio support	HD Audio,	, Realtek® ALC3287	codec /	, ,,	eu iocus
		FHD (192 ThinkPad		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°		stereo spe	eakers, 2W x 2, Dolb	y® Audio™ Premium	/ e / microphone comb	امماد
		Guard	,		Anti-giare	400 1113	10.3	1000.1	12/8	170	Keyboard		uai array iar-ileid mid Il-resistant, multimed	1 7 1		oo jack
	14.0"	WQHD (2 Dolby Visi	560x1440	IPS	Glossy	500 nits	16:9	1500:1	100% Adobe	170°	UltraNav™	TrackPoin	t® pointing device an	d buttonless Mylar s	urface multi-touch tou	uchpad
Multi-touch (opt)	-				inger ges	ture (FHD o	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 S	SD / SAL	4 6.00 NVN 2	Gb/s Me, PCIe	30 x 4					NFČ (optional)		d Communication			
	• M.2	2242 SS	SD / PCI	IVN e	Me, PCIe	3.0 x 2					Battery Max battery life		l Li-ion 50Wh battery <i>rk® 2014:</i> 14.7 hr	, supports Rapid Ch	arge (charge up to 80	0% in 1hr)
		l Optane 2280, P				olid State St	orage,				Iviax battery life	* Battery li	fe varies significantly w		her factors	
Optical	None	2200, F	CIE INVIV	ie 3.0	7 X 4						AC adapter		W slim USB Type-C	<u> </u>		
Ethernet						ection I219-					· · · · · ·		10 Home 64 or Win			
		model:				ection I219-					Limited warranty	One of the	following, configurable lepot repair service	by model:		
WLAN Bluetooth™						2.11ac + Blu			. .			 3-year/1 	-yr battery depot rep	air service		
						Ni-Fi + Blue	looth C	Jilibo adapte	3 1		-	• 3-year/1	-yr battery limited or	nsite service		
WWAN (optional)	Wireless WAN upgradable (special bid only in EMEA)										Mil-Spec test	MIL-STD-	810G military testing)		
	 Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EN) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card 									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 L859 NAN upa	บ-GL, M.2 ca aradable	ard							
SIM card (opt)						LTE (US) SI										













ThinkPad P51 Platform Specifications

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













ThinkPad P52 Platform Specifications

Processor	8th Gener	ation Ir	ntel® Cor	e™ i7 / i9 Pr	ocessor or	Intel X	(eon® E Pro	ocessor	Dimensions	<i>WxDxH:</i> 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight	WxDxH(Touch): 14.86" x 9.93" x 1.02-1.21"; 377.4mm x 252.3mm x 25.8-30.7mm Non-touch model: starting at 5.4 lb / 2.45kg; Multi-touch model: starting at 6.4 lb / 2.9kg
	i7-8750H i7-8850H i9-8950HK	6	12	2.2 GHz 2.6 GHz 2.9 GHz	4.1 GHz 4.3 GHz 4.8 GHz	9MB 9MB 12MB	DDR4-2400		Case color Case material	Display cover: Glass-Fiber Reinforced Plastic; Bottom: Magnesium/Aluminum
	E-2176M			2.7 GHz	4.4 GHz	12MB		Intel UHD Graphics P630	Smart card reade ExpressCard	*Optional: Smart card reader None
Graphics	NVIDIA Qu P3200 (60 supports 6 supports f Max resolu	uadro® GB mer externa our ind ution:	P1000 (4 mory, VR al digital r dependen 3840X21 5120X28	ready); nonitor via it displays; 60@60Hz 80@30Hz	ory), P2000 HDMI, Min (DisplayPo	(4GB i Displa rt via N	/lini Display	or 'hunderbolt™; 'Port cable); 60Hz (HDMI)	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card Three USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals
Chipset Memory	only on Xe * Installed D	n-ECC eon pro DIMMs a	C or 64ĠE ocessor), are actuall	BECC max dual-chanr	nel capable but run at 24	e, four [4 (ECC fun DDR4 SO-I due to Intel I	ction supported DIMM sockets limitation	Camera (optional,	* Depending on many factors, actual data transfer speed may be lower than theoretical speed One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Display	30 72	00 nits, 2% gan	16:9 asp nut, 160°	ect ratio, 7 viewing an	00:1 contra	ast ratio	LED backliç D, LED backli		- Audio Support	action nearles Alc3266 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / optional dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Multi-touch (opt)	40)0 nits,)0% ga	16:9 asp amut, 170	ect ratio, 1 o viewing a	000:1 cont	rast rat -touch	io,	_	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Pen Storage Optane™ memory RAID (optional)	Supports purposes of the Supports purposes of	pen ac res (two HDD / M.2 St Intel O	cessory, M.2 SSD SATA 6.0 SD / PCIe Optane me	please see and one HD OGb/s, 2.5" e NVMe, PO	the acces D), supports wide, 7mn Cle 3.0 x 4	sory co single son high, , 32Gb	ompatibility sided M.2 22 Active Prot /s	for details 80 drives only ection System™	Color calibration	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Touch style match on chip fingerprint reader on the palm rest None Near Field Communication
Optical Ethernet	None			nernet Coni	nection I21	9-V (Ja	acksonville)		Battery Max battery life	Swappable Li-ion 90Wh battery Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr
WLAN	vPro mode	_					Jacksonville th 5.0, M.2	<u> </u>	(<i>MobileMark</i> ® 2014) - AC adapter	170W slim tip AC adapter
Bluetooth™	Bluetooth	5.0 wir	reless, in	tegrated in	Wi-Fi + Blu		combo ada		Operating system	One of the following, configurable by model: • Windows® 10 Home 64
WWAN (optional)	 Wireless 	WAN	upgradal	<i>rable by mod</i> ole Iband 4G L						 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
SIM card (opt)	Intel XM	M™ 73	60 (Fibod	com L850-0 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	nly	nigh, Ac	tive Protect	tion System™	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Optane™ memory Optical	Some: M. Some: 12	.2 SSE 28GB I WWA	D / PCle I M.2 SSD N slot as	NVMe, PCI / PCIe NVI 2nd Storac	le 3.0 x 2, 1 Me, PCle 3 de, mutually	6Gb/s .0 x 2, / exclus	16Gb/s, sive with W\	,	0 1	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest anti-spoofing technology
Ethernet	Non-vPro				nection I21 nection I21			9)	NFC (optional) Battery	Near Field Communication Optional integrated Li-ion 32Wh battery and
WLAN +	Intel Dual	Band \	Wireless-	AC 8265, V	Ni-Fi 2x2 80)2.11ac	+ Bluetoot	th 4.1, M.2 card	Max battery life	swappable Li-ion 24Wh, 48Wh, or 72Wh battery
Bluetooth™					limited to B7	74.1 by V	Vindows OS		(MobileMark® 2014)	Models 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh Max battery life 12.2 hr 18.5 hr 13.5 hr 20.1 hr 26.3 hr
WWAN (optional)	One of the fWirelessIntegrate	WAN	upgradal	ble					AC adapter	* Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter
	Intel XMI • Integrate				EB), M.2 ca	ırd (EM	EA only)			Windows® 10 Home 64 or Windows 10 Pro 64
SIM card (opt)	Intel XMI * For non-W	M™ 73 /WAN r	60 (Fibo	com L850-0 neans the mo	GL), M.2 ca odel is NOT V n LTE (US)	VWAN u			Limited warranty	One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year (including battery) limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant













ThinkPad P53 Platform Specifications

Processor		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 (WAWAN models) in 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 (WAWAN models) in 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 (with the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (with the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (with the function of PD and DP). HDMI 14.b; thereof (E.f.4.5), nano-SM card slot (with the function of PD and DP). HDMI 14.b; thereof card eader Nono-BM card slot (E.f.4.5), nano-SM card slot (with the function of PD and DP). HDMI 14.b; thereof card slot (E.f.4.5), nano-SM card slot (with the function of PD and DP). HDMI 14.b; thereof Connoction PD and DP.		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			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 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 **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 *MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) **Battery life varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter Operating system Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty *One of the following, configurable by model: *1-year depot repair service *3-year/1-yr battery limited onsite service 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 al 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			g. 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		







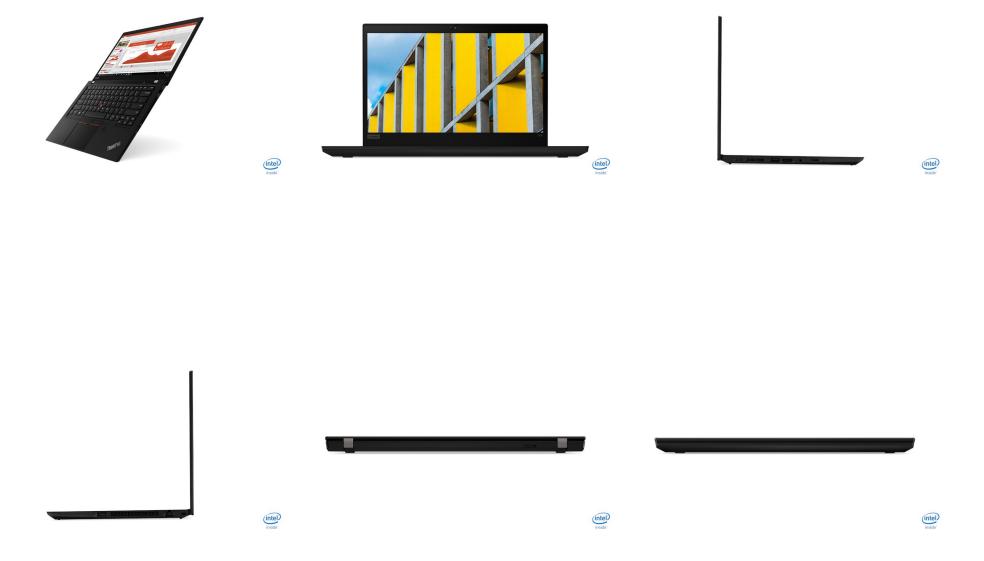
ThinkPad T480 Platform Specifications

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		amera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fi • IR camera and HD720p camera, fixed focus udio support HD Audio, Realtek® ALC3287 codec /				
Display	olay Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS,								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: 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut,							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	following WAN ed Mob M™ 72 ed Mob	g, configui upgradal ile Broad 32 (Fibod ile Broad	rable by mod ole Iband 4G L com L830-I Iband 4G L	del (mutually .TE, EB), M.2 ca .TE-A,	exclusiv	e with Intel O	ptane memory):	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)	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								Mil-Spec test	MIL-STD-8	10G militai	ry testing		
									Environment	EDEATM G	old (LIS or	nly); ENERGY STAR® 6.	1. DoUS compliant	



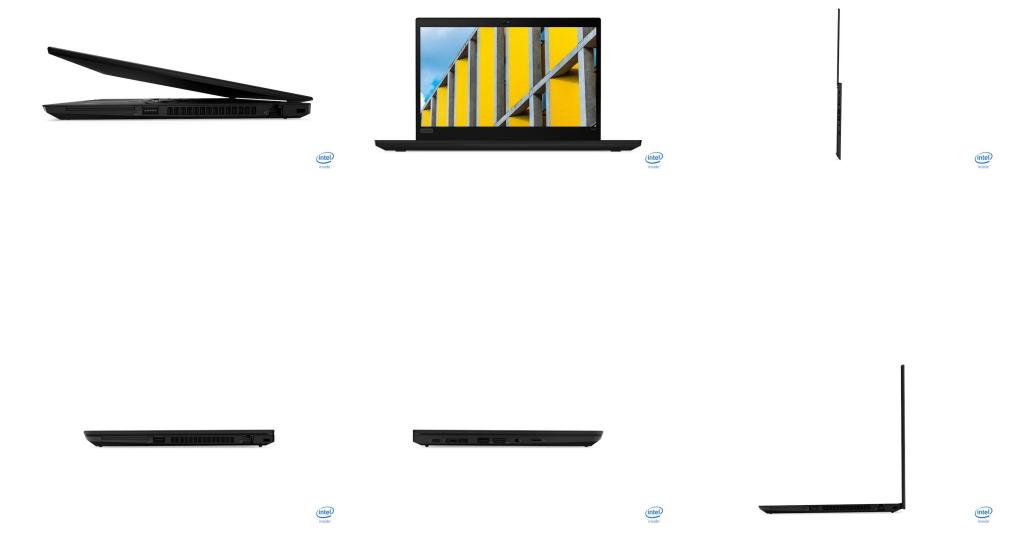
ThinkPad T480s Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions W	VxDxH: 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						\Ci	, 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	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	()		-			ed onsite service	C SCI VICC	
	• 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 	dable (sp	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 Gen	eration Ir	ntel® Cor	e™ i5 / i7	Processor					Dimensions	WxDxH:	12.95" x 8.94" x 0.70";	329mm x 227mm x 17.9mm				
	Processo Number		# of Threads	Base Frequence	Max Turbo C	ache	Memory Types	Proces Graph		Weight	Models Weight	FHD 3.41 lb / 1.55 kg	Privacy Guard 3.56 lb / 1.61 kg				
	i5-8265U i5-8365U i7-8565U i7-8665U	4	8	1.6 GHz 1.6 GHz 1.8 GHz 1.9 GHz	4.1 GHz 4.6 GHz	6MB 6MB 8MB 8MB	DDR4-2400	ntel UHD (620		Case color Case material	Black Display co	over: PPS / 50% GF;		ıt);			
	Intel UH NVIDIA® supports supports Max reso	D Graph GeForce externa three in olution:	nics 620 i ce® MX25 al digital i ndepende 4096x23	monitor via ent display 04@60Hz	or and DDR5 memor a HDMI or Thu s; (Thunderbolt	inderb	,	IHz (HDN	ЛI)	Smart card reade RFID reader Media reader Ports	rNone RFID read MicroSD o Two USB one USB one USB	der supporting RFID / NF card reader 3.1 Gen 1 (one Always 0 3.1 Type-C Gen 1 (with t 3.1 Type-C Gen 2 / Thur	On), the function of Power Delivery and Display derbolt 3 (with the function of PD and DP)	/Port),			
Chipset Memory	48GB m 8GB or	ax / 2400 16GB me	OMHz DI emory so	ldered to	n channel capa systemboard, but run at 2400	one D		tation		Monitor cable	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN model), headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical spee HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter						
Display	Size Res	solution	Т	ype Surfa		Aspec Ratio			Viewing Angle	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to HDMI: Lenovo USB-C to HDMI Adapter						
	14.0" FH	D (1920x ⁻	1080) I	PS Anti-gl	300 11115	16:9	700:1	45%	170°	Bundled Accy	USB-C to HDMI: Lenovo USB-C to HDMI Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter None nal) One of the following, configurable by model:						
	14.0" FHI		1080) ivacy I	PS Anti-gl	(multi-touch) are 400 nits	16:9	1000:1	72%	170°	Audio support	 HD720p IR came HD Audio 	camera with ThinkShut era and HD720p camera . Realtek® ALC3287 cod	ter camera privacy, fixed focus with ThinkShutter camera privacy, fixed fo ec /	ocus			
					esture (FHD o	nly)					stereo spe dual array	eakers, 2W x 2, Dolby® A far-field microphone, he	Audio M Premium / eadphone / microphone combo jack				
		280 SSD	/ PCIe N	6.0Gb/s NVMe, PC NVMe, PC						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
	• Intel O M.2 22 None Non-vPr	ptane™ 280, PCI o model	Memory e NVMe	H10 with 3.0 x 4	Solid State St	-V (Ja	cksonville)			Security Security chip System Mgt (opt) Fingerprint reade NFC	Discrete T Intel vPro rFIPS 201	PM 2.0, TCG Certified	ssword, supervisor password, security key Im rest	hole			
WLAN (optional) Bluetooth™ (opt) WWAN (optional)	Bluetoot	eless-AC h 5.0 wir	C 9560, V reless, in	Vi-Fi 2x2 8 tegrated i	nnection I219- 02.11ac + Blue 1 Wi-Fi + Blue del:	etooth	า 5.0			Battery Max battery life AC adapter	MobileMa * Battery li	rk® 2014: 16.11 hr	pports Rapid Charge (charge up to 80% in ettings, usage, & other factors C adapter	n 1hr)			
, , ,	Wireless WAN upgradable (special bid 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 None									Operating system Optional: 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-Spec test	est MIL-STD-810G military testing						
										Environment	EPEAT™	Silver; ENERGY STAR®	7.1; RoHS-compliant				



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 * Installed memory	m on Ch 2GB / 24	ip) platform 00MHz DDI	R4 / soldered	to syste	emboard,	no socke		Media reader Ports	MicroSD Two USB one USB	card reader 3.1 Gen 1 (one A 3.1 Type-C Gen 1	lways On), (with the function of Power		
Display	Size Resolution	1	Type Surfac	e Brightness	Aspec			Viewing Angle		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter				
	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)					
	14.0" FHD (1920x ⁻¹ Low Power		IPS Anti-gla	re 400 nits	16:9	800:1	72%	170°	Bundled Accy					
	14.0" FHD (1920x ⁻ ThinkPad Pri Guard		IPS Anti-gla	re 400 nits	400 nits 16:9 1000:1 72% 170° Camera Oi						following, configurate camera with Thir	ole by model: nkShutter camera privacy, fi	xed focus	
	Guard 4.0" WQHD (2560x1440) HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ HDR, Dolby Vision™ Premium / Stereo speakers, 1W x 2, Dolby® Audio™ Premium / Stereo speakers									mera privacy, fixed focus				
Multi-touch (opt) Storage	• M.2 2280 SSD			sture (FHD or	nly)				_	dual array		one (optional for special bid	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)	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								Limited warranty	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 # of # of Base Base Base Base Base Carbo Carbo Control Carbo	Processor	AMD Ryzen™ PRO Mob	ile Processo	rs with Rade	on™ Ved	na Graphics	•		Dimensions	WxDxH:	12.95" x 8.94" x	: 0.70": 329mm	x 227mm x 17.9mm	
Case color Case material		Processor # of # of	Base	Max Turbo	1	Memory		essor						
Pro 3900 4			Frequency	Frequency		Controller				Weight	3.46 lb / 1.57 kg	3.46 lb / 1.57 kg	3.39 lb / 1.54 kg	
Pro 3500U 4 8 2 1 GHz 3 / 1 GHz 4 1 GHz 2 MB 12 3 / 1 GHz 4 1 GHz 2 MB 12 3 / 1 GHz 4 1 GHz 2 MB 12 3 / 1 GHz 4 MB 12 3 / 4 GHz 4 MB 12 3 / 4 GHz 4 MB 12 4 GHz 4 MB 12 4 GHz 4 MB 12 4 GHz 4 MB 12 4 GHz 4 MB 12 4 GHz 4 MB 12 4 GHz 4			2.1 GHz	3.5 GHZ 4I	MB L3		Grap	hics						
Region R			2.1 GHz			DDR4-2400			Smart card reade					
Supports externed digital monitor via SSB-C of HDMI; supports externed digital monitor via SSB-C of HDMI; supports to unidependent displays; Max resolution: 4096x2304 @ 6042 (USB-C); 4096x2160 @ 6042 (HDMI) Chipset Memory AMD SAC (System on Chip) platform AMD SAC (System on Chip) platform ADD SA			2.3 GHz						Media reader	MicroSD o	card reader 3.1 Gen 1 (Alway	rs On), one USB 3	3.1 Gen 2,	
Chipset Memory 32GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket 'nstatled memory is actually 2666MHz but run at 2400MHz due to AMD limitation' Display Size Resolution Type Surface Brightness Aspect Contrast Color Viewing Camera (optional) USB-C to DF3. USB-C to USA. USB-C	Graphics	supports external digital supports four independent	monitor via ent displays:	USB-C or HI	DMI;	•	HDMI)			HDMI 2.0, headphon microSD	Ethernet (RJ-45) e / microphone co card reader, side o), nano-SIM card sombo jack, optionadocking connector	slot (WWAN models), al smart card reader, r. security kevhole	
Size Nesolution Image: String		32GB max / 2400MHz I 8GB or 16GB memory s	DDR4, dual- soldered to s	channel capa systemboard,	one DI	DR4 SO-DII e to AMD lim	MM sock	æt	(optional)	HDMI to V USB-C to USB-C to	<i>VGA:</i> Lenovo HI <i>VGA:</i> Lenovo U	DMI to VGA Monit SB-C to VGA Ada	or Adapter pter	
Audio support 14.0" FHD (1920x1080) IPS Anti-glare Control 16:9 700:1 45% 170° 17	Display	Size Resolution	Type Surfac	e Brightness					Camera (optional) One of the following, configurable by model:				
stereo speakers, 2W x 2, Dolby® Audiol™ Premium / dual array far-field microphone (optional for special bid model), headphone / microphone combo jack Multi-touch (opt) 14.0° FHD (1920x1080) IPS Anti-glare 400 nits 16:9 800:1 72% 170° Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / SATA 6.0Gb/s M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Storage M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Supports 10-finger gesture (FHD only) Security chip System Mgt Discrete TPM 2.0, TCG Certified System Mgt Discrete TPM 2.0, TCG Certified Power-on password, supervisor password, security keylon Discrete TPM 2.0, TCG Certified Power-on password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, supervisor password, s		14.0" HD (1366x768)	TN Anti-gla	re 220 nits	16:9	400:1	45%	90°	Audio oumout				Shutter camera privacy, fixed focus	
Multi-touch (<i>opt</i>) On-cell touch, supports 10-finger gesture (FHD only) Storage • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 2 Optical Optical Realtek® RTL8111 Gigabit Ethernet connection 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 combo adapter WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 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 Nano-SIM card slot, optional Verizon LTE (US) SIM card UltraNav™ TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Security Power-on password, hard disk password, supervisor pasword, supervisor password, supervisor password, supervisor passwo			IPS Anti-gla	re (non-touch) 300 nits	16:9	700:1	45%	170°	Addio Support	stereo spe dual array	eakers, 2W x 2, D far-field micropho	olby® Audio™ Pre one (optional for s	mium / pecial bid model),	
Storage • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 Optical Optical Optical Realtek® RTL8111 Gigabit Ethernet connection WLAN One of the following, configurable by model: • Realtek® RTL8822E, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth¹™ WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 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 Nano-SIM card slot, optional Verizon LTE (US) SIM card • M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 Security chip System Mgt Fingerprint reader Optional: Touch style match on chip fingerprint reader on the palm rest Noise NSH Management Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1 with 65W AC adapter MobileMark® 2014: 13.4 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter Operating system Optional: Operating system Mgt * Battery Max battery life AC adapter * Bottery life MobileMark® 2014: 13.4 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter Operating system Optional: Operating optional: * 1-year depot repair service * 3-year/1-yr battery depot repair service * 3-year/1-yr battery depot repair service * 1-year 4-year/1-yr battery depo		Low Power				800:1	72%	170°	Keyboard UltraNav™	6-row, spi TrackPoin	Il-resistant, multim	nedia Fn keys, opt and buttonless M	ional LED backlight ylar surface multi-touch touchpad	
• M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • M.2 2242 SSD / PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Realtek® RTL8111 Gigabit Ethernet connection WLAN One of the following, configurable by model: • Realtek® RTL822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 4.2 or 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: • 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 • Mil-Spec test MIL-STD-810G military testing PASH Management Optional: Touch style match on chip fingerprint reader on the palm rest NFC None Battery Max battery life * Battery integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1 with 65W AC adapter Max battery life * Battery integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1 with 65W AC adapter Max battery life * AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) * 1-year depot repair service • 1-year 42-year/1-yr battery limited onsite service • 1-year 42-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing				esture (FHD c	only)				Security	Power-on	password, hard d	isk password, sup	pervisor password, security keyhole	
Optical None Ethernet Realtek® RTL8111 Gigabit Ethernet connection 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 Bluetooth™ Bluetooth 4.2 or 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) WWAN (optional) SIM card (opt) One of the following, configurable by model: • 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 MFC None None None None Max battery life Max battery life * Max battery life * AButery life varies significantly with settings, usage, & other factors * 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 (optional) • 1-year depot repair service • 1-year depot repair service • 1-year 1-yr battery limited onsite service Nano-SIM card slot, optional Verizon LTE (US) SIM card Mil-Spec test MIL-STD-810G military testing	Storage	• M.2 2280 SSD / PCIe	NVMe, PCI						System Mgt	DASH Ma	nagement		int reader on the nalm rect	
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 Bluetooth™ Bluetooth 4.2 or 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE-A, Fibocom 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 With 65W AC adapter Max battery life AC adapter AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty (optional) • 1-year depot repair service • 3-year/1-yr battery depot repair service • 1-year + 2-year/1-yr battery limited onsite service 1-year + 2-year/1-yr battery limited onsite service Mil-Spec test Mil-Spec test Mil-Spec fixed adapter MobileMark® 2014: 13.4 hr * 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 (optional) • 1-year depot repair service • 3-year/1-yr battery limited onsite service 1-year + 2-year/1-yr battery limited onsite service Mil-Spec test MIL-STD-810G military testing	Optical		1441010, 1 01	0 0.0 X Z					NFC	None	Touch Style mate	ir on only ingcipi	introduct on the paintrost	
Pealtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth™ Bluetooth 4.2 or 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: 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 Max battery life AC adapter MobileMark® 2014: 13.4 hr *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 (optional) 1-year depot repair service 3-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		Realtek® RTL8111 Giga	bit Ethernet	connection					Battery			ery, supports Rap	id Charge (charge up to 80% in 1hr)	
Bluetooth 4.2 or 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: Vireless 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 Mil-Spec test Mil-Spec test AC adapter 45W 01-65W 03B Type-C AC adapter 45W 01-65W 03-CATA 45W 01-65W 03-CATA 45W 01-65W 03-C	WLAN	Realtek® RTL8822BE,	Wi-Fi 2x2 8	02.11ac + Bl			ard		,	MobileMa * Battery li	rk® 2014: 13.4 h fe varies significantl	y with settings, usag	e, & other factors	
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 *Mil-Spec test Limited warranty (optional)	Bluetooth™						adapter	r			71			
• 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 • 1-year depot repair service • 3-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	WWAN (optional)	One of the following, config	urable by mo	del:			•		I				s 10 Pro 64	
	,	 Integrated Mobile Broat * For non-WWAN model, it 	adband 4G l	odel is NOT WI	WAN up	gradable	ard			• 1-year de • 3-year/1 • 1-year +	epot repair service yr battery depot r 2-vear/1-vr batte	e epair service rv limited onsite se	ervice	
Environment EPEAT™ Silver: ENERGY STAR® 7.1: RoHS-compliant									Mil-Spec test	test MIL-STD-810G military testing				
									Environment	EPEAT™ :	Silver; ENERGY S	STAR® 7.1; RoHS-	compliant	

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

Lenovo February 2020



ThinkPad T495s Platform Specifications

Processor	AMD Byze	an™ PR	Mobil	e Proc	accore	with Rad	eon™ Ve	ga Graphics	<u> </u>		Dimensions	WyDyH (FHD / Privacy G	Guard):	
1 10003301	Processor	# of	# of	Bas		ax Turbo		Memory	Proce	ssor		,	12.95"	x 8.90" x 0.66"; 329.0mm x	226.15mm x 16.7mm
		Cores	Threads	Freque	ency Fre	equency	Cache	Controller	Grap			WxDxH (Low Power):	x 8.89" x 0.63"; 328.8mm x	225 8mm v 16 1mm
	Ryzen 5 Pro 3500U	4	8	2.1 G	iHz 3	.7 GHz ²	2MB L2 / 4MB L3		Radeon Grap		Weight	Models	FHD	FHD Low Power	FHD Privacy Guard
	Ryzen 7	4	8	2.3 G	Hz /	0.647	MB L2 /	DDR4-2400	Radeon \	Vega 10		Weight	2.92 lb / 1.33 kg	2.76 lb / 1.25 kg	2.89 lb / 1.31 kg
	Pro 3700U	7	0	2.5 C	1112 4	.0 0112	4MB L3		Grap	hics	Case color Case material	Black	over: CFRP Hy	rbrid:	
Graphics	AMD Rade supports e supports the	externa hree in	ป digital เdepend	monito ent dis	or via Ú: splavs:	SB-C or I	HDMI;				Smart card reade	Bottom: er Optional:	Magnesiú Smart card rea	ım/Aluminum	
						SB-C); 4	096x21	60@24Hz (I	HDMI)		Media reader Ports		card reader 3.1 Gen 1 (Alw	ays On), one USB 3.1 Gen 2)_
Chipset Memory		ĠB / 24	400MHz	Ż ĎĎR	4 / solde			ard, no sock ue to AMD lim				two USB HDMI 2.0	3.1 Type-C Gen), Ethernet exter	2 (w/ the function of Power lasion connector, nano-SIM carecombo jack, optional smart	Delivery and DisplayPort 1.4). ard slot (WWAN models),
Display	Size Reso	lution	-	Гуре S	Surface	Brightnes	Aspec Ratio			Viewing Angle		microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theore HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
		" FHD (1920x1080)								170°	Monitor cable (optional) Bundled Accy	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			
	14.0" FHD Low F	(1920x1 Power	1080)	IPS Ar	nti-glare	400 nits	16:9	800:1	72%	170°	Camera	, ,			
	FHD (1920x1080)							1000:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed fo HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack 			
Multi-touch (opt)			<u> </u>				only)						,		
Storage Optical	M.2 2280 None	SSD/	PCIe N\	/Me, F	PCIe 3.0) x 4					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpace			
Ethernet	Realtek® F										Security	Power-on	password, hard	d disk password, supervisor p	bassword, security keyhole
WLAN <i>(optional)</i> Bluetooth™	Intel Wirele Bluetooth							i 5.0 combo adap	ter		Security chip System Mgt Fingerprint reader	DASH Ma	TPM 2.0, TCG C anagement Touch style ma	certified atch on chip fingerprint reade	r on the nalm rest
WWAN (optional)					y model:						NFC	None	rodon otylo me	ttorr orr ornp imgerprimt reade	Torraio paini root
	WirelessIntegrate* For non-W	ed Mob	ile Broa	dband	4G LTE	E-A, Fibo	com L85	60-GL, M.2 o	ard		Battery	with 65W	AC adapter	attery, supports Rapid Charg	e (charge up to 80% in 1hr)
SIM card (opt)	Nano-SIM										Max battery life AC adapter	* Battery I	ark [®] <i>2014:</i> 16.4 life varies significa 5W USB Type-C	ntly with settings, usage, & other	factors
											Operating system	Optional:	Windows® 10 H	Home 64 or Windows 10 Pro	64
											Limited warranty (optional)	 1-year o 3-year/ 			
											Mil-Spec test		-810G military te		
											Environment	EPEAT™	Silver; ENERG	Y STAR® 7.1; RoHS-compliar	nt
Note: The specifica	ations above	may n	ot be av	ailable	in all reg	gions.									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 3	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	SoC (System on Chip) platform GB max / 2400MHz DDR4, dual-channel capable, B or 16GB memory soldered to systemboard, one DDR4 SO-DIMM socket stalled memory is actually 2666MHz but run at 2400MHz due to Intel limitation GB Resolution Type Surface Reightness Aspect Contrast Color Viewing Type Surface Reightness Aspect Contrast Color Viewing One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus															
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	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)					
	vPro I	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)		ne 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									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 Fort First Base Max Turbo Cashe Memory Types Processor Case octor	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
Signature Sign							Cache	Memory Types	Graphics	Case color	Black or Silver (silver case is NOT available in EMEA)
Port Frocessor		i5-7300U	2	4	2.6 GHz	3.5 GHz	змв	LPDDR3-1866			Bottom: magnesium allóy / PPS hybrid
Processor February Processor Proce		or 8th Ge	neratior	n Intel C	ore i5 / i7	Processor					
Seption Fig. 17.0 Hz 18.0 Hz 1.0 Hz							Cache	Memory Types			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,
Supports external digital monitor via HDMI or USB Type-C; supports external digital monitor via HDMI or USB Type-C; supports twice independent displays; Max resolution: 5120x2880 @ 60Hz (USB Type-C); 4096x2160 @ 30Hz (HDMI) Chipset Memory BCB or 1668 / 2133MHz LPDDR3 / soldered to systemboard, no sockets System clocks down for processors with lower memory controller One of the following, configurable by model: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 169 aspect ratio, 7001 contrast ratio, 72% gamut, 170" viewing angle 14.0" (355mm) HDR WGHD (2560x1440) with Dolby Vision", glossy, LED backlight, IPS obacklight, IPS (300 nits, 169 aspect ratio, 7001 contrast ratio, 72% gamut, 170" viewing angle 14.0" (355mm) HDR WGHD (2560x1440) with Dolby Vision", glossy, LED backlight, IPS obacklight,		i5-8350U i7-8550U	4	8	1.7 GHz 1.8 GHz	3.6 GHz 4.0 GHz	6MB 8MB	LPDDR3-2133		Monitor cable	headphone / microphone combo jack, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Chipset Intel SoC (System on Chip) platform SGB or 166B / 2133MHz LPDDB3 / soldered to systemboard, no sockets System clocks down for processors with lower memory controller Audio support Audio	Graphics	supports t	externa three in	ıl digital ıdepend	monitor vi	a HDMI or ys;	USB T	ype-C;		Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
## Pisplay Pisplay P						\ 71	e-C); 4	4096x2160@3	BOHz (HDMI)	Camera (optional,	
Display Content of the following, configurable by mode: 14.0" (355mm) MyChl (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170" viewing angle 1.14.0" (355mm) MyChl (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170" viewing angle 1.14.0" (355mm) MyChl (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170" viewing angle LED backlight, IPS, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170" viewing angle None of the following, configurable by mode: None Non	Chipset Memory	8GB or 16	SGB / 2 locks do	133MH: wn for pr	z LPDDR3 ocessors w	/ soldered ith lower me			sockets	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Son nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle 1.14.0° (355mm) MOHD (2560X140), anti-glare, LED backlight, 170° viewing angle 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle 1.4.0° (355mm) HDR WOHD (2560X1440) with Dolby Vision™, glossy, LED backlight, 1PS, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle 170° viewing angle 200 on-cell touch, supports 10-finger gesture (FHD only) Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxXGB SSD M.2) • M.2 SSD / PCle NVMe, PCle 3.0 x 4, 32Gb/s (e.g. xxXGB SSD M.2 PCle NVMe) None Ethernet Native Intel Ethernet Connection 1219-V (Non-vPro) or 1219-LM (νPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN + One of the following, configurable by model: • Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card "For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SiM card slot, optional Verizon LTE (US) SIM card Sounds and Gentle Fibration and part of the state of the	Display						. I ED	haakliaht IDC			
* 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, glossy, LED backlight, IPS, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage One of the following, configurable by model: * M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) * M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) 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 + Bluetooth™ Intel Wireless-AC 9266, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) * Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (special bid only) * Integrated Mobile Broadband 4G LTE-A, intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (special bid only) * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card * SIM card (opt) * Integrated Mobile Broadband 4G LTE-A, but is limited to BT4.1 by Windows OS * WIL-STD-810G military testing Environment * EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		300 nits	, 16:9 ́a 55mm)	aspect ra WQHD	atio, 700:1 (2560x14	contrast ra 40), anti-gl	atio, 72 are, LE	% gamut, 170 ED backlight, II	° viewing angle PS,		
Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCle 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCle NVMe) 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 + Bluetooth™ One of the following, configurable by model: • Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) * Intel 8265ac card supports B74.2 but is limited to B74.1 by Windows OS WWAN (optional) SIM card (opt) NFC (optional) NFC (optional) NFC (optional) NFC (optional) Near Field Communication Near Fie		• 14.0" (3: LED bac 170° vie	55mm) cklight, wing ar	HDR W IPS, 50 ngle	/QHD (256 0 nits,16:9	60x1440) waspect rat	ith Dol io, 150	by Vision [™] , gl 0:1 contrast ra	ossy,	Security chip vPro (optional)	Discrete TPM 2.0, TCG Certified Intel vPro Technology
• M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2) • M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxGB SSD M.2 PCIe NVMe) 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 + Bluetooth™ Plue Intel Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) * Intel 3265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) SIM card (opt) Plue Intel XMM™ 3360 (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 Plue Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Plue Intel Similar (US) SIM card Intel Simal Similar (US) Similar (US) Similar (US) Similar (US) Similar (ID only	')		"	anti-spoofing technology
Optical None None Max battery life Ma	Storage						M 2)				
Ethernet Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN + Doe of the following, configurable by model: Intel Dual Band Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) 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 (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card *Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W Low Halogen USB-C AC adapter Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty 1-year depot repair service 1-year depot vith 2-year system board 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 Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant								xxxGB SSD N	M.2 PCIe NVMe)	ballery	
WLAN + Bluetooth™ WWAN (optional) WWAN (optional) WWAN (optional) WWAN (optional) WWAN (ard (opt)) SIM card (opt) Was bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN + One of the following, configurable by model: Intel Dual Band Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card (special bid only) Intel Bilietooth™ WWAN (optional) WWAN (optional) WWAN (optional) SIM card (opt) AC adapter Joperating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty Operating system Optional: Windows® 10 Home 64 or Windows 10 Pro 64 Limited warranty One of the following, configurable by model: 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 3-year/3-yr battery limited onsite service Mil-Spec test Mi										Max battery life	
* Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card	Ethernet	Native Into	el Ethernet Connection l219-V (<i>Non-vPro</i>) or l219-LM (<i>vPro</i>) ed or optional ThinkPad Ethernet Extension Adapter Gen 2						Pro) 12		45W, 65W, or 65W Low Halogen USB-C AC adapter
• Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (special bid only) * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) WWAN (optional) 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 * Mil-Spec test Nil-Spec test										I — — — — —	
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 Nano-SIM card slot, optional Verizon LTE (US) SIM card *Intel XMM™ 7360 (Fibocom L850-GL), M.2 card *Mil-Spec test Environment *MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	Bluetooth₁м	 Intel Wir (special 	eless-A bid onl	\C 9260 v)	, Wi-Fi 2x2	2 802.11ac	+ Blue	tooth 5.0, M.2	oth 4.1, M.2 card card	Limited warranty	 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service
SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	WWAN (optional)	Intel XMM	™ 7360	0 (Fiboc	om L850-0	GL). M.2 ca	ırd				
Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant	SIM card (opt)							<u> </u>	,		
	(-1-9	and (opey Halifo Olivi Card Slot, Optional Volizon ETE (OO) Olivi Card				Environment					

Lenovo February 2020 2019

















ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th G	Generation I	ntel® Co	re™	i5 / i7 Pro	ocessor					WWAN (optional)	One of the following, configurable by model:
	Proce Numl i5-82 i5-83	essor # of ber Cores 65U	# of Threads	Fre	Base Mequency F	Max Turbo Carequency 3.9 GHz 6	MB MB	Memory Types	Gra	essor phics UHD		 Wireless WAN upgradable (special bid only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i7-85	65U ⁴	8	1.	8 GHz	4.6 GHz 8	MB L	LPDDR3-2133		ics 620	Dimensions	WxDxH (Privacy Guard): 12.72" x 8.54" x 0.61"; 323mm x 217mm x 15.4mm WxDxH (other model): 12.72" x 8.54" x 0.59"; 323mm x 217mm x 14.95mm
	or 10	th Generati	on Intel			rocessor (No	OT av	ailable in EV	1EA)		Weight	Privacy Guard model: starting at 2.66 lb / 1.21 kg;
	Proce		# of Thread			Max Turbo Ca	ache	Memory Types		essor phics	Case color	Other model: starting at 2.4 lb / 1.09 kg Black paint or black weave
		210U ₄	8	1	.6 GHz	4.2 GHz 6	MB MB	LPDDR3-2133	Intol	UHD	Case material	Display cover: Carbon Fiber; Bottom: magnesium alloy
	_	710U 6	12	_			2MB	LPDDR3-2133	Gra	phics	Smart card reader Media reader	None
Graphics	supp supp Max	orts three in resolution:	al digital ndepend 5K@60	mor dent Hz (nitor via H displays; Thunderb	DMI or USE	Туре	e-C / Thunder	rbolt;		Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset Memory	Intel 8GB	SoC (Syste or 16GB / 2	m on Cl 2133MH	hip) լ z LP	platform DDR3 / s	oldered to s	ysten	nboard, no so	ockets		Monitor cable Bundled Accy	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Display	Size	Resolution		Туре	Surface	Brightness	Asped Ratio	Ct Contrast Ratio	Color Gamut	Viewing Angle	' ') One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
		FHD (1920x Multi-touch		IPS	Anti- reflection Anti- smudge	300 nits	16:9	700:1	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack
	14.0"	FHD (1920x Low Power FHD (1920x		IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
	14.0"	ThinkPad Pri Guard		IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
	14.0"	WQHD (256		IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	System Mgt (opt)	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest
	14.0"	UHD (3840x) HDR 400, Dolby Vision		IPS	Glossy	500 nits	16:9	1400:1	90%	170°	NFČ (optional)	Near Field Communication
Multi-touch (opt)			multi-to				sture	e (FHD only),			Battery Max battery life	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter MobileMark® 2014: 18.3 hr
Storage	One o	of the followin	g, config	urabl	e by model	, ,					1	* Battery life varies significantly with settings, usage, & other factors 45W, 65W, or 65W slim USB-C AC adapter
		2 2280 SSD 2 2280 SSD										Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	 Inte 	el Optane™	Memory	y H1	0 with Sol		rage,					One of the following, configurable by model:
Optical	M.2 None	2 2280, PCI6 9	e NVMe	3.0	x 4							 1-year depot repair service 1-year depot with 2-year system board repair service
Ethernet	Nativ							1219-LM (<i>vPi</i>	ro)			 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WLAN +		of the followin									Mil-Spec test	MIL-STD-810G military testing
Bluetooth™	 Inte 	el Wireless-A el Wi-Fi 6 AX (201 for 10tl	K201, W	/i-Fi 2	2x2 802.1	1ax + Blueto	ooth 5	5.0			Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant
Note: The specific	ations	above mav r	not be av	/ailab	ole in all re	aions.		•				Lenovo



















ThinkPad X1 Extreme (2nd Gen) Platform Specifications

Processor	9th G	eneration	n Intel® C	ore™ i5	i / i7 / i9 F	Processor					Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Proce Numb	er Cor	es Threa	ds Free	quency Fi	lax Turbo requency Cacl	ne Ty	mory pes	Proces Graph		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb / 1.7 kg; Multi-touch model: starting at 4.0 lb / 1.81 kg
	i5-930 i5-940 i7-975	00H 4 50H 6	8	2.5	GHz 4		3 B DDR	4-2666 Ir	ntel UHD (630			Black paint (FHD model) or black weave (UHĎ model) Display cover: CFRP/GFRP hybrid; Bottom: Aluminum alloy
	i7-985					4.6 GHz 12M 4.8 GHz 16M					Media reader	er Optional: Smart card reader SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card
Graphics	NVID suppo suppo	IA® GeFo orts exter orts four i	rce® GT nal digita ndepend	X 1650 Il moni lent dis	tor via HI plavs:	ind DDR5 memor DMI or Thund olt); 4K@60H	lerbolt™				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	Mobil 64GE	e Intel Cl 3 max / 20	M246 Ch 666MHz	ipset DDR4,	dual-cha	annel capable	, two D	DR4 SC	D-DIMM s	sockets	Monitor cable (optional)	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Display	Size	Resolution	1	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	=	Optional: ThinkPad Ethernet Extension Cable
15.6" FHD (1920x1080) IPS Anti-glare 300 nits 16:9 700:1 72% NTSC 170° Camera (optional) One of the following, configurable by r									HD720p camera with ThinkShutter camera privacy, fixed focus			
	15.6	FHD (192 Dolby Visi	on™ HĎR	IPS	Anti-glar	e 500 nits	16:9	1200:1	72% NTSC	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
	15.6"	UHD (384 Dolby Visi	0x2160) on HDR	IPS	Anti-glar	e 500 nits	16:9	1200:1	100% Adobe	170°		optional dual 360° far-field microphone, headphone / microphone combo jack, Dolby Atmos® sound system
	15.6"	UHD (384 Dolby Visi Multi-touc	on HDR,	OLED	Anti- reflection Anti- smudge	(poak)	16:9	100000:1	100% DCI-P3	170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
Multi-touch (opt) Pen (optional)	anti-r		(AR), an	i-smud	upports 1	10-finger ges	ture (UI	HD OLE	D only),		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 or Touch style match on chip fingerprint reader on the keyboard bezel
Storage	M.2 2	two M.2 S 280 SSD	/ PCle I	VMe 3	3.0 x 4						Color calibration NFC	Optional: X-Rite Pantone factory color calibration (UHD model only) None
RAID <i>(optional)</i> Optical	RAID None	0/1 supp	ort								Battery Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 14 hr
Ethernet						V (<i>Non-vPro</i>) rnet Extensio			Pro))		AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
WLAN <i>(optional)</i> Bluetooth™						x + Bluetooth i-Fi + Bluetoo		bo adan	ter		Operating system Limited warranty	Optional: Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model:
WWAN SIM card	None None		σ.σσσ,	og.c				<u> </u>			_ 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

December 2019





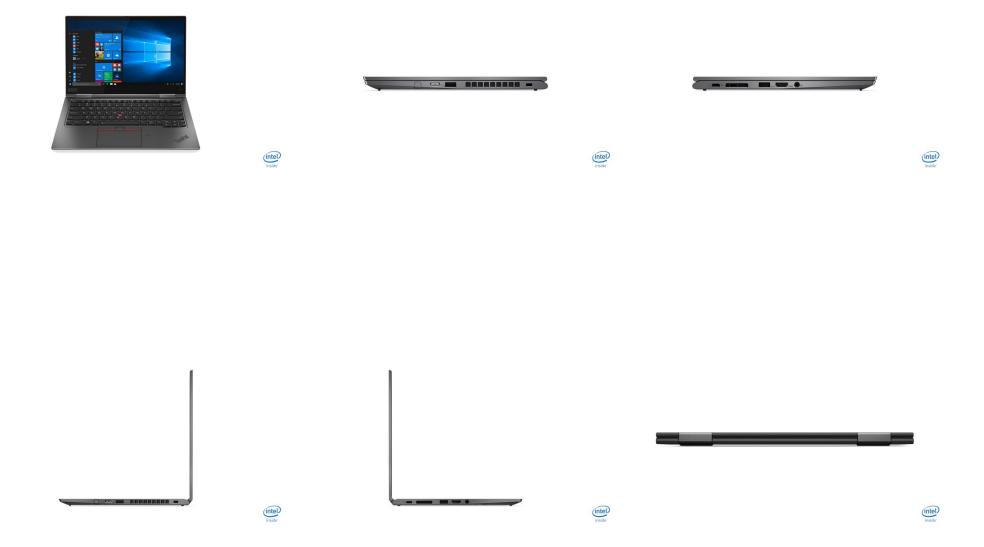






ThinkPad X1 Yoga (3rd Gen) Platform Specifications

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 11 with 65W USB Type-C AC adapter <i>MobileMark</i> ® 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 gyrmetier CDS frontier is integrated into WWAN module				
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 G			re™ i5 / i7 Pro	ocessor					WWAN (optional)	One of the following, configurable by model:				
	Proce		# of Threads		Max Turbo requency Cach	ne Mem	nory Types	Proce Grap	essor		 Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 				
	i5-826	5U	Timodado		3.9 GHz 6ME	3		Grap	71100	SIM card (opt)	* For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card				
	i5-836	4	8		4.1 GHz 6ME 4.6 GHz 8ME	— II PI I	DR3-2133	Intel	UHD cs 620	Dimensions	WxDxH (Privacy Guard): 12.71" x 8.58" x 0.63"; 323mm x 218mm x 15.95mm				
	i7-866				4.8 GHz 8ME	_		Старт	03 020	Weight	WxDxH (other model): 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Privacy Guard model: starting at 3.24 lb / 1.47 kg;				
	or 10	h Generat	ion Intel	Core i5 / i7 Pi	rocessor (NO	Γavaila	able in EN	1EA)			Other model: starting at 2.99 lb / 1.36 kg				
	Proce Numb		# of Threads		Max Turbo Frequency Cac	he Men	nory Types	Proce Gran	essor	Case color Case material	Iron Grey Display cover: Aluminium;				
	i5-102		8		4.2 GHz 6M	В		·		Consult as and as a de	Bottom: Magnesium				
	i7-105				4.9 GHz 8M	_	DR3-2133	Intel Grap	ohics	Smart card reade Media reader	None				
	i7-107	<u> </u>	12		4.7 GHz 12M					Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b,				
Graphics	suppo	rts externa	al digital	monitor via H	Graphics in pr DMI or USB T			rbolt;			Ethernet extension connector, nano-SIM card slot (WWAN models).				
				ent displays;	olt); 4K@24F	r. Iz (HDI	MI)				headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed				
Chipset	Intel S	SoC (Syste	m on Ch	ip) platform	•	,	· ·			Monitor cable Bundled Accv	Optional: Lenovo HDMI to VGA Monitor Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2				
Memory	8GB	or 16GB / 2	2133MHz	<u>LPDDR3/s</u>	oldered to sys	tembo	ard, no so	ockets			One of the following, configurable by model:				
Display	Size	Resolution		pe Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	A !!	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus				
	14.0"	FHD (1920x Low Power	, IL	S Anti-reflection		16:9	800:1	72%	170°	Audio support	HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 / four 360° far-field microphones, headphone / microphone combo jack				
		FHD (1920x ThinkPad Pi Guard	rivacy IF	Anti-Sinuag	smudge 400 mils		1000:1	72%	170°	 Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad				
	14.0"	14.0" WQHD (2560x1440)		Anti-reflection	i-reflection ti-smudge 300 nits		800:1	72%	170°	Security	Power-on password, hard disk password, supervisor password, security ke				
		UHD (3840) HDR 400, Dolby Visior	(2160) IF	A 11 (1 11	on 500 - it-	16:9	1400:1	90%	170°	Fingerprint rèadé	Discrete TPM 2.0, TCG Certified Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest				
Multi-touch	Capa	citive-type	multi-tou	ch, supports	10-finger gest	ure,		•	•	NFC (optional)	Near Field Communication				
	AH (a could	nti-reflection reduce the	on) / AS e brightn	(anti-smudge) ess by up to 1) coating, I0%					Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter				
Hinge Convert-mode	Yoga	hinge, 360 p, tent, sta	degree	ablat						Max battery life	MobileMark® 2014: 18.1 hr * Battery life varies significantly with settings, usage, & other factors				
Pen					i-touch display	, on-bo	oard recha	argeable	е	AC adapter	45W, 65W, or 65W slim USB-C AC adapter				
Storage				rable by model	<u>:</u>						Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
	 M.2 2280 SSD / SATA 6.0Gb/s M.2 2280 SSD / PCle NVMe 3.0 x 4 Intel Optane™ Memory H10 with Solid State Storage, M.2 2280, PCle NVMe 3.0 x 4 									Limited warranty (optional)	 1-year depot repair service 1-year depot with 2-year system board repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 				
Optical	None	-								Mil-Spec test	MIL-STD-810G military testing				
Ethernet	Nativo via op	Intel Ethe	ernet Cor nkPad Etl	nnection I219 nernet Extens	-V (<i>Non-vPro</i>) sion Adapter G	or I21 Gen 2	9-LM (<i>vP</i>	ro)		Environment	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant				
WLAN Bluetooth™				Wi-Fi 2x2 802	.11ac + Blueto			er		1					

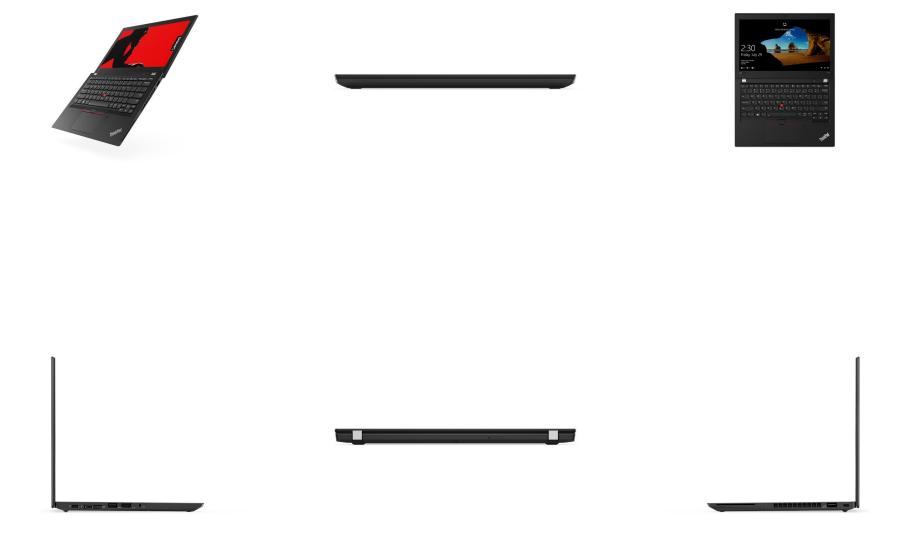






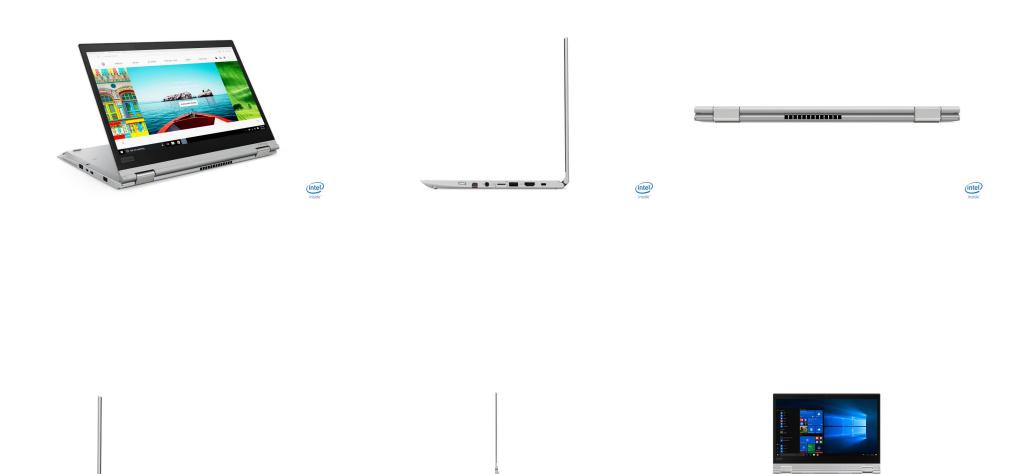
ThinkPad X270 Platform Specifications

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			DDR4-2133		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							020		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) platform in the System on Chip platform in the System on Chip) platform in the System on Chip platform in the System on Chip platform in the System on Chip platform in the System on Chip) platform in the System on Chip pl														
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 Mz ≥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)	Security chip vPro <i>(optional)</i> Fingerprint reader	Discrete TPM 2.0, TCG Certified					
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° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), and 150 ratio, 170° viewing angle some: 12.5° view FHD (1390x1080), a	Memory								er 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, 6ctive Protection System™ Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig is mutually exclusive with WWAN and Wigig is mutually exclusive with WWAN should be a feature of the following, configurable by mode! (WiGig is mutually exclusive with WWAN): 1 hiet Dual Band Wireless-AC 8260, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless-AC 8260, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless-AC 8265, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless-AC 8265, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless-AC 8265, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless-AC 8265, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265, Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wireless AC 8265 (Wi-Fi 2x 802.11ac + BT4.1 1 hiet Dual Band Wi	Display	Some: 12.5" (3"	17.5mm) 16:9 asr	HD (1366X) ect ratio 50	/68), anti-glare, L 00:1 contrast ratio	.ED backligi	nt,							
Some: 12.5° (317.5 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 state of the solid view set in the some some: 14.5° (317.5 min) FHD (1920x1080), and the some some state of the solid view set in the some some state of the solid view set in the some some state of the solid view set in the some some state of the solid view set in the some state of the solid view set in the s		Some: 12.5" (3	17.5mm)	HD (1366x)	768), anti-glare, L	ED backlig	nt, IPS,	Max battery life	Models No + 3-cell 3-cell + 3-cell 3-cell + 6-cell 48Wh 3-cell + 6-cell 72Wh					
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	/ A A I I A A I I B OOL A	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
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									* Battery life varies significantly with settings, usage, & other factors					
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 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 **Us only) **Bluetooth** 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: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model: **Intel Revenue of the following configurable by model (mutually exclusive with WWAN): **Intel Revenue of the following configurable by model (mutually exclusive with WWAN): **Intel Revenue of the following configurable of the following configurable of th	Storage	System has one H	DD slot or	one M.2 228	0 slot exclusively for	r storage		Operating system						
Some: M.2 SSD / SCH NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / SATA 6.0Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN and WiGig Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-V (Jacksonville) vPro model: Intel Ethernet Connection I219-V (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* **United 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 **3-year/3-yr battery limited onsite service **Ill-Spec test* **MIL-STD-810G military testing **Environment* **Environment* **Environment* **Environment* **Environment* **Environment* **Environment* **Windows 10 Pro 64* **Windows 10 Pro 64* **Windows 10 Pro 64* **Windows 10 Pro 64* **Window	Ü								through downgrade rights in Windows 10 Pro 64 • Windows 10 Home 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* TM 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* Connect	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-year/3-yr batterý limited onsite service Mil-STD-810G military testing Environment EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant Environment 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 Mobilities 	oile Broad	lband 4G L	TE,		•							
	SIM card (ant)						MEA) CIM og "d							
	Glivi Caru (<i>Upi)</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		OU is NO	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 ent displays	Graphics 6 HDMI or U	20 in p	rocessor; e-C;	1	Monitor cable (optional) Bundled Accy	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				
	Max resol	ution: 4	4096x23	04@60Hź	ÚSB Type	·C); 40	96x2160@	30Hz (HDMI)	Camera (optional) One of the following, configurable by model:					
Chipset Memory	4GB, 8GB * 4GB mem	or 160 Nory is N	GB / 240 <i>IOT availa</i>	p) platform OMHz DDF ble in US an cessors with	R4 / soldere <i>d EMEA</i>	,		no sockets	Audio support	 • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / 				
Display	22	Some: 12.5" (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,			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified				
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)	vPro <i>(optional)</i> Fingerprint reade	Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology				
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)									<u> </u>	n Optional: Windows® 10 Home 64 or Windows 10 Pro 64				
SIM card (opt)	Intel XM • Integrate Intel XM * For non-M Nano-SIM	 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, in the combo slot with microSD card reader, optional Verizon LTE (US) SIM card 								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				



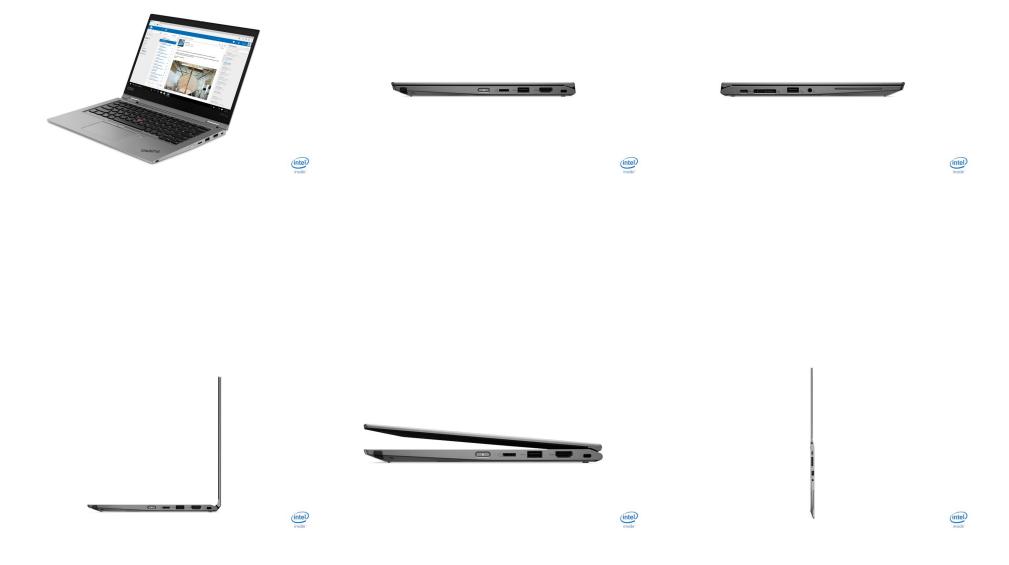
ThinkPad X380 Yoga Platform Specifications

Processor	7th Genera	ation In	tel® Core	e™ i5 Proce	essor				Smart card reade	rOptional: Smart card reader (mutually exclusive with NFC)				
	Processor Number i5-7200U		# of Threads	Base Frequency 2.5 GHz	Max Turbo Frequency 3.1 GHz	Cache 3MB	Types	Processor Graphics Intel HD Graphics	Media reader Ports	One microSD card slot (microSD, microSDHC, microSDXC), 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	Monitor cable	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	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:				
	i5-8350U 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 external digital monitor via HDMÍ or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)							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	Yoga hinge Laptop, ter ThinkPad	nt, stan	d, yoga a	and tablet pen for mu	ılti-touch di	splay, o	n-board red	chargeable	Light sensor G-sensor/ eCompass	Ambient Light Sensor 3D accelerometer and 3D magnetometer 3D compass				
Storage	Some: M.						0 0 000C C	SSD PCIe NVMe)	Gyroscope	3D gyrometer				
Optical	None None	2 330	/ PCIE N	vivie, PCIE	3.0 X 4, 3	2GD/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™							c + Bluetoot combo ada	h 4.2, M.2 card pter		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 				
WWAN (optional)	One of the f					1 000	ED M.O	(Mil-Spec test	MIL-STD-810G military testing				
SIM card (opt)		d Mobil	e Broadl				-ЕВ, М.2 са 50-GL, М.2	rd (EMEA only) card	Environment	EPEAT™ Gold; ENERGY STAR®; RoHS-compliant				
Dimensions Weight Case color	WxDxH: Starting at Black or si	3.17 lk			313.5mm	(222.21	mm x 18.2n	nm						
Case Material	Carbon-Fil		orid											
										l enovo				



ThinkPad X390 Platform Specifications

Processor	8th Ge	neration	Intel®	[®] Core [™]	[™] i3 / i5 / i	7 Processo	or				Dimensions	Models	FHD Non-touc	h	HD / FHD Multi-touch			
		Processor # of Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Types Memory Types Processor Graphics			Carbon Fiber	311.9mm x 217.0mm x 16.5mm 12.28" x 8.54" x 0.65"												
	i3-8145U 2 i5-8265U				2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB					PPS	312.0mm x 217.2mm x 12.28" x 8.55" x 0			312mm x 217.2mm x 16.9mm 12.28" x 8.55" x 0.67"		
	i5-8365	4		8 —	1.6 GHz	4.1 GHz	6MB	DDR4-2400	Intel UHD Gr 620	rapnics	Weight	Models	FHD Non-touch	Н	ID	FHD Multi-touch		
	i7-8565			` _	1.8 GHz	4.6 GHz	8MB					Carbon Fiber	2.70 lb / 1.22 kg	-	-	<u>-</u>		
	i7-8665		tion l		1.9 GHz	4.8 GHz	8MB	roilabla in I	 		Coop color	PPS	2.85 lb / 1.29 kg	2.93 lb /	/ 1.33 kg	2.84 lb / 1.28 kg		
											Case color Case material Display cover: Bottom: Carbon Fiber (FHD non-touch only) or PPS; Magnesium/Aluminum							
	i5-1021	DU 4		8	1.6 GHz 1.8 GHz	4.2 GHz 4.9 GHz	6MB 8MB	DDR4-2400	· ·		Media reader	er Optional: Smart card reader MicroSD card reader, in the combo slot with nano-SIM card						
Graphics	Intel UHD Graphics 620 or Intel UHD Graphics in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI))		Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPor one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,						
Chipset Memory	4GB, 8 * <i>32GB</i>	GB`, 16G memory i	B or	32GB / T availab	le for mod	els with 10th	Gen pro		board, no so	ockets	Monitor cable (optional)							
Display	Size R	Resolution		Туре	Surface	Brightnes	Brightness Aspect Contrast Ratio Ratio			ewing Angle	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2						
	13.3" H	D (1366x	768)	TN	Anti-glar	e 250 nits	16:9	500:1	45%	90°	Camera (optional))• HD720p can	nera with ThinkShutter	camera pri	vacy, fixed fo	ocus		
	13.3" FHD (1920x1080)) IPS	Anti-glar	e 300 nits	16:9	800:1 (non-touch) 700:1 (multi-touch)		170°	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed HD Audio, Realtek® ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone (optional for special bid model). 							
	FHD (1920x1080) 13.3" ThinkPad Privacy Guard				Anti-glar	e 400 nits	16:9	1000:1	72% 1	178°	Keyboard	headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight						
Multi-touch (opt)			oggue	orts 10-	 finaer aes	 sture (FHD	onlv)				UltraNav™	6-row, spiii-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
Storage	 M.2 2 M.2 2 M.2 2 Intel 	280 SS 242 SS 280 SS	 D / S/ D / P(D / P(^M Mer	ATA 6.0 Cle NV Cle NV mory H	Gb/s Me, PCle Me, PCle 10 with S	3.0 x 2		,			Security Security chip System Mgt (opt) Fingerprint reader NFC (optional)	Power-on password, hard disk password, supervisor password, security keyhor Discrete TPM 2.0, TCG Certified that Intel vPro Technology er Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication						
Optical	None										Battery		on 48Wh battery, suppo	orts Rapid (Charge (cha	arge up to 80% in 1hr		
Ethernet								l219-LM (ι dapter Ger			Max battery life	with 65W AC adapter MobileMark® 2014: 17.6 hr * Battery life varies significantly with settings, usage, & other factors						
WLAN (optional)						302.11ac +					AC adapter	45W, 65W, or	65W slim USB-C AC a	dapter		,		
Bluetooth™ (opt)						11ax + Blu Wi-Fi + Blu			pter		Operating system	Optional: Win	dows® 10 Home 64 or	Windows 1	0 Pro 64			
WWAN (optional) SIM card (opt)	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter • Wireless WAN upgradable (special bid only in EMEA) • Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA 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,										(optional)	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 3-year/1-yr battery limited onsite service			service			
(, ,					SIM card			,			Mil-Spec test	MIL-STD-8100	G military testing					
											Environment	EPEAT™ Gold	; ENERGY STAR® 7.1;	EPEAT™ Gold; ENERGY STAR® 7.1; RoHS-compliant				



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	Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)										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	8GB or 16	6GÉ/2	2400MHz	p) platform DDR4 / so <i>2666MHz t</i>	Idered to s	ystemb 00MHz a	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	(1920x	1080) I	S Anti- reflection	n 300 nits	16:9	800:1	72%	170°		HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
Multi-touch Hinge		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)	 I) One of the following, configurable by model: Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card for special bid only 										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	Ryzen™ Pl	RO Mobi	le Pro	ocessors	with Rad	leon™ Ve	ga Graphics	i		Dimensions	WxDxH: 12.28" x 8.55" x 0.67"; 311.9mm x 217.2mm x 16.9mm
	Proce		# of Threads			ax Turbo requency	Cache	Memory Controller		essor ohics	Weight	Models HD / FHD multi-touch FHD non-touch FHD Privacy Guard
	Ryzer	3 4	4	i -		2 5 GHz	2MB L2 /	Controller	Radeor	vega 6	Case color	Weight 2.91 lb / 1.32 kg 2.82 lb / 1.28 kg 3.01 lb / 1.37 kg Black
	Pro 33	300U	'			,	4MB L3 2MB L2 /			ohics n Vega 8	Case material	Display cover: PPS/GF; Bottom: Magnesium/Aluminum
	Pro 3		8	2.1	GHz 3	3.7 GHz	4MB L3	DDR4-2400		ohics	Smart card reade	r Optional: Smart card reader
	Ryzer Pro 37		8	2.3	GHz 4		2MB L2 / 4MB L3			Vega 10 ohics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2,
Graphics	suppo	Radeon Vorts externorts three in esolution:	al digital	moni dent d	itor via U Iisplavs:	ISB-C or I	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	SoC (Systor 16GB / 2 lled memor	2400MH	z ĎĎi	R4 / sold	ered to sy	OOMHz du	ard, no sock ie to AMD limi	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	Resolution	-	Туре	Surface	Brightnes	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		One of the following, configurable by model:
	13.3"	HD (1366x7	768)	TN .	Anti-glare	250 nits	16:9	300:1	45%	90°	(1)	HD720p camera with ThinkShutter camera privacy, fixed focus
	13.3"	FHD (1920)	x1080)	IPS	Anti-glare	300 nits	16:9	800:1 (non-touch) 700:1 (multi-touch)	72%	170°	Audio support	 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
	13.3"	FHD (1920) ThinkPad P Guard	x1080) Privacy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint®pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch (opt)	On-ce	ell touch, s	upports	10-fir	nger gest	ure (FHD	only)				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage		2280 SSI 2280 SSI				20 × 4					System Mgt	DASH Management
Optical	None		J/PCIE	IVIVIVI	e, PCIE	3.0 X 4					Fingerprint reade	r Optional: Touch style match on chip fingerprint reader on the palm rest None
Ethernet	Native via bu	e Realtek® Indled or c	RTL815 optional T	3 Gig Γhinkl	abit Ethe Pad Ethe	ernet coni ernet Exte	nection nsion A	dapter Gen 2	2		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
WLAN <i>(optional)</i> Bluetooth™		Vireless-A ooth 5.0 w						5.0 combo adapt	er		Max battery life	MobileMark® 2014: 14.5 hr * Battery life varies significantly with settings, usage, & other factors
WWAN (optional)		f the following			by model	l:					AC adapter	45W or 65W USB Type-C AC adapter Optional: Windows® 10 Home 64 or Windows 10 Pro 64
	Inte	eless WAN grated Mo on-WWAN	bile Broa	adban	nd 4G LT	E-A, Fibo	com L85	50-GL, M.2 c	ard		Limited warranty	One of the following, configurable by model:
SIM card (opt)		-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
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

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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.

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.

January 2020 - Version 554

Additions in this update

► New product(s)

ThinkSmart Edition Tiny M920q for Zoom Rooms

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(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

















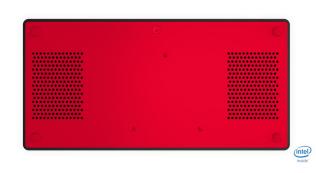


ThinkCentre M920z Platform Specifications

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 a security of the	adapter to enable vPro function through wireless connection)
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Security features	 Security slot (in rear for attachment of optional Kensington® MicroSaver® cable; Boot sequence control
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	-	Kensington lock also locks chassis) • Boot sequence control • Boot without keyboard and mouse
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	-	 Smart USB protection, allows keyboard/ Individual USB port disablement
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices • Optional Chassis intrusion switch
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	_	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 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
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	adapter to enable vP Discrete TPM 2.0, TO	Pro function through CG Certified		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620	Security features	• Security slot (in rea	ar for optional	 Boot sequence 	
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		Kensington® Micro	Saver® cable)		yboard and mouse
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		Chassis intrusion sPower-on passwor		 Individual USB Smart USB pro- 	port disablement tection, allows keyboard/
	Core i7-8665U	4/8	1.9G / 4.8G	8 MB	DDR4-2400	UHD 620		Administrator password Hard disk password Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
Memory	8GB or 16GB / DDR						Keyboard				
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane	2 SSD 5D / PCIe I 5D / PCIe I ™ Memory	NVMe, PCIe 3.0 NVMe, PCIe 3.0	x 4* x 2 State St			Mouse				
RAID Optical	* M.2 SSD / Optane with RAID 0/1 support (R. None	h SSD in Po AID prese	Cle 3.0 x 2 M.2 slot t only available v	t can only ia speci	al bid model)		Mechanical	Nano (0.35L), black Three M.2 slots: two for WLAN		PCIe 3.0 x4 and or	ne PCIe 3.0 x2) and one
Graphics	Intel UHD Graphics	620 in pro	cessor, uses ma	ain mem	ory, DirectX® 12,	one			Dimension	ns (WxDxH)	Weight (Approx.)
	DisplayPort™, one U displays; Max resolution: 4096	,,		' '	, , ,	ndependent		M90n-1 Nano (with fan, 0.35L)	7.05" X 3.4	46" X 0.87" 3mm X 22mm	1.11 lb (0.505 kg), vary by config
Monitor cable	Optional DP to VGA HDMI dongle, Type-C	dongle,`Dl	o to HDMI dongle			, Type-C to	Mounting	Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75mm			, , , , ,
Chipset	Intel SoC (System of						Floor Stand	Some: DIN rail mou None	nt bracket kit		
Front ports (Std.)	* 2x USB 3.1 Gen2, 1) jack (3.5mm)	(USB 3.1	Type-C Gen 2, o	ne head	lphone / microph	one combo	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (Not for TIO models)			TIO models)
Rear ports (Std.)	* 2x USB 3.1 Gen2, 1x power-in [20V and >4 * Depending on many f	45W]), 1x	eťhernet (RJ-45)	, 1x Dis	pláyPort ´ '		Limited warranty		ted onsite service	e / service upgrade	es available
Audia augaset	Realtek ALC233VB /			eeu may	be lower trian trieor	elicai speed	Preload	Preloaded operatin	g system		
Audio support WLAN	Some: 11ac wireless	s, M.2 Car	d, Realtek RTL8		(dual band),			Some: Windows® 1 Some: Windows 10	0 Pro 64-bit Home 64-bit		
	Some: 11ac wireles	s, M.2 Cai	ombo adapter, 1 d, Realtek RTL8 ombo adapter, 2	822CE	(dual band),		Environment	ENERGY STAR® 7.1 TUV ultra low noise			ca), ErP Lot 3, TCO 8.0, EEE, REACH
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Car tooth 5.0 c	d, Intel Wireless ombo adapter, 1	-AC 946 x1	, , , , , , , , , , , , , , , , , , , ,		MIL-SPEC test				re, Low Temperature, Shock, Solar Radiation)
	Some: 11ac wireles: Wi-Fi + Bluet	s, M.2 Cai tooth 5.0 c	d, Intel Wireless ombo adapter, 2	-AC 956 x2			Accessories	For compatible acces			
		cooth 5.0 c	ombo adapter, Ir	ntel vPro	tèchnology sup	port, 2x2					
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Inte					e on LAN®					
Note: The specifics	ations above may not be	available	in all regions								Lenovo, July 2019



















ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th	Generation	on Intel Core™ i	3 Proces	ssor		Manageability	None					
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip Security features	 Security slo 	1 2.0, TCG Certified of (in rear for optional	Boot sequence	e control		
	Celeron 4205U	2/2	1.8G	2 MB	DDR4-2133	UHD 610		 Kensington[®] Chassis intr 	MicroSaver® cable)	Boot without k Individual USE	eyboard and mouse		
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		Power-on page 1		• individual USE	3 port disablement		
Memory	4GB / DDR4-2666* / * System automatically of	soldered t	o systemboard, for the processors	no sock with low	ets, non-ECC ver memory control	ler		Administrator password Hard disk password					
Storage	* M.2 SSD / Optane with	IVMe, PCIe 3.0 H10 with Solid 9 t support Celero Cie 3.0 x 2 M.2 slot	x 2 State St on) can only	run at PCIe 3.0 x2		Keyboard Mouse	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black						
RAID Optical	RAID 0/1 support (R/None	<u> </u>				® 10 ana	Mechanical	Four M.2 slots			ne PCIe 3.0 x2), one for		
Graphics	Intel UHD Graphics DisplayPort™, one Us displays;							WLAN, and or	one for WWAN Dimer	sions (WxDxH)	Weight (Approx.)		
Monitor cable	Max resolution: 4096. Optional DP to VGA	dongle, DF	to HDMİ dongle			, Type-C to		M90n-1 Nan (fanless, 0.	no IoT 7.05"	X 3.46" X 1.36" (88mm X 34.5mm	1.58 lb (0.72 kg), vary by config		
Chipset	HDMI dongle, Type-C Intel SoC (System o						_	With I/O b		X 3.46" X 2.41" (88mm X 61.3mm	2.65 lb (1.2 kg), vary by config		
, ,	* 2x USB 3.1 Gen2, 1x jack (3.5mm), 2x seri	al	,						A mount bracket kit, so A mount bracket kit wi	upports VESA 75mm th adaper holder, supp	ports VESA 75mm		
Rear ports (Std.)	* With Celeron: 1x US power	r-in [20V, >	45W]), 1x ethe	rnet (RĴ	I-45), 1x DisplayF	Port	t Floor Stand	Some: DIN rail mount bracket kit					
I/O box*	With Core i3: 1x US suppo Optional I/O box, con extends 2x serial, 2x gigabit ethernet), 1x	rt power-ir nect to the ethernet (n [20V, > 45W]), e USB 3.1 Type- RJ-45, I/O box is	2x ethe C Gen 2 s equipp	rnet (RJ-45), 1x I 2 port of M90n-1 ped with Realtek	ĎisplayPort Nano, RTL8153B,	Power supply	Some: 65 war for Ma		autosensing, 88% PSI ide temperature)*, aut	J osensing, 88% PSU (only		
Audio support	* Depending on many fa Realtek ALC233VB /		<u>'</u>	eed may	be lower than theor	retical speed	Limited warranty			vice / service upgrad			
WLAN	Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet	s, M.2 Card ooth 5.0 cos, M.2 Card ooth 5.0 co	d, Realtek RTL8 ombo adapter, 1 d, Realtek RTL8 ombo adapter, 2	x1 822CE x2	(dual band),		Preload	Preloaded op Some: Wind Some: Wind	perating system dows® 10 Pro 64-bit dows 10 Home 64-bit	e (only available via s			
	Some: 11ac wireless	ooth 5.0 cos, M.2 Car	ombo adapter, 1	x1 -AC 956			Environment	TCO 8.0*, TU	AR® 7.1*, EPEAT™ Si IV ultra low noise veri odels with I/O box	ver rating (North Ame fied (on some models	erica)*, ErP Lot 3,), RoHS, WEEE, REACH		
	Some: 11ac wireless Wi-Fi + Bluet	s, M.2 Care ooth 5.0 c	d, Intel Wireless ombo adapter, Ir	-AC 956 ntel vPro	o technology sup	port, 2x2	MIL-SPEC test	MIL-STD-810 Temperature S)H* (Low Pressure [Al Shock, Humidity, San	titude], High Temperat d and Dust, Vibration,	ture, Low Temperature, Shock, Solar Radiation)		
Bluetooth Ethernet	Some: Bluetooth 5.0 With Celeron: Gigab With Core i3: Two g Wake	it ethernet	, Realtek RTL81	11K, 1x	k RJ-45, Wake or		Accessories			e go to http://smartfir			
Note: The energifie	ations above may not be	ن مامامانمینم	n all regions								Lenovo January 2020		













ThinkCentre M710 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®. or 6/7th Gene	eration Ir	ntel Core™ i3 / i5	/ i7 Processor	Security features	Security slot (in rear for optional	Power-on password
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)		Joseph Marianes	Kensington® MicroSaver® cable) • Padlock loop	Administrator password Hard disk password
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ 	Boot sequence control
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		 mouse only, blocks all storage devices Optional cable lock to physically lock 	Boot without keyboard and mouseIndividual USB port disablement
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		both keyboard and mouse	Optional chassis intrusion switch
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB co	
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530	l to j z out u	Some: Lenovo Traditional Keyboard (USB	connector), black
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Calliope Wireless Keyboar	d (2.4GHz via USB receiver), black
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB conr Some: Lenovo Calliope Wireless Mouse (2	
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Machanical	• SFF (8.4L), black color; metal case	2. TGT 12 VIG GGB 10001V01), SIGGR
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mechanical	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm >	(290.5mm X 343.5mm
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		 Approx. 13.2 lb (6.0 kg), weight may vary 	
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		 Toolless cover, disk, optical removal 	
Memory	64GB max, UDIMI dual-channel capa * System automati	ble*			•		r	 Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional b. 	av)
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0GI e (SSD) / PCIe N	b/s, 2.5" IVMe, P(Cle 3.0 x 4, 32Gb	/s		Slot 1: low-profile (length < 150mm, height Slot 2: low-profile (length < 150mm, height Slot 3: low-profile (length < 150mm, height	< 68mm), PCIe 3.0 x16* < 68mm), PCIe 3.0 x1* < 68mm), PCIe 3.0 x1*
Optical	Some: Intel Optar Some: DVD-ROM Some: DVD Burn	l SATA 1.5 er (DVD±l	5Gb/s Drive, slim RW), SATA 1.5Gl	(9.0mm)	101.2		Slot 4: no slot, only bracket for optional por M.2 card slots: Two (one for WLAN, one for * Optional 2 front USB3.1 Type-C ports mo	r SSD/Optane)
Onboard SATA Media reader	Three onboard SA Optional 7-in-1 me	dia reade	r				Floor Stand	optional rear 2x USB2.0 / parallel / 2nd ser Optional system floor stand for vertical orie	ial occupies one expansion slot
Graphics	Intel HD Graphics one VGA, two Disp discrete graphics t Max resolution: 40 Some: NVIDIA Ge two Display	olayPort™, o support 96x2304 (e force® G /Port, 35 v	supports 3 inde more displays; (DP) @ 60Hz; 204 r 730 , DirectX 12 vatts;	pendent 8x1536 2, 2GB, F	displays, works a (VGA)@50Hz PCIe 2.0 x8 adapt	long with	т оттол одрргу	Some: 180 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 25ome: 1-year or 3-year, depot service / 1-year or 3-year, limited onsite states.	U (only available via special bid) service upgrades available
Monitor cable	Max resolu Optional DP to VG	<i>tion:</i> 3840 A, DP to I	0x2160 (DisplayP DVI-D (single link	ort)@60 (), DP to	Hz; dual DP, or DP to	HDMI 1.4	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64	
Chipset	Intel B250 Chipse	et						preinstalled through downgrade	
Front ports*	Four USB 3.1 Gen	1, optiona	al two USB 3.1 Ty	/pe-C Ge	en 2 (only availabl	e via special		rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel	
D +	bid), microphone (3.5mm), h	eadphone (3.5m	im)) 0 (0)			processor)	
Rear ports*	Two USB 3.1 Gen serial (9-pin), optic							Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit	
	two PS/2 ports (ke	yboard/m	ouse);	1101 (110	10), 0110 1 0, 1, 1111	Diopiayi ort,	'	Preloaded applications (only some	
	additional DisplayF	ort on op	tional graphics o	n some ı	models			listed)	
Rear audio ports?	Line-in (3.5mm), li	ne-out (3.	5mm), microphoi	ne-in (3.5	ōmm)			 Microsoft Office preloaded; 	
ILLL 1004	None * Depending on many	v factors a	ctual data transfer s	sneed may	, he lower than theo	retical speed		purchase a product key to activate	
Audio support	High Definition (HI			· · ·	·		_	Only for Window 10Lenovo Companion	
WLAN ¹³	Some: 11ac wirele	, .				,	-	- Only for Window 7	
V V L/\(\)\	Wi-Fi + Blu	uetooth 4.	1 combo adapter	r, 1x1	,	, .		Lenovo Solution Center Lenovo Think Vantago Tools	
	Some: 11ac wirele	ess, M.2 (Card, Qualcomm	Atheros	QCA6174A (dua	l band),		Lenovo ThinkVantage ToolsCreate Recovery Media	
	Wi-Fi + Blu Some: 11ac wirele		1 combo adapter		ologo AC 2165			Adobe® Reader®	
			1 combo adapter		EIESS-AC 3105,			Cyberlink PowerDVD Create (DVD - DVV)	
	Some: 11ac wirele	ess, M.2 (Card, Intel Dual E	Sand Wir	eless-AC 8265,		Environment	(DVD±RW) ENERGY STAR® 6.1, EPEAT™ Gold rating	(North America)
Bluetooth™	Some: Bluetooth	uetooth 4. 4 1 wirele	1 combo adapter	r, 2x2 Wi-Fi	RT combo adante	r	LIMIOIMIEM	ErP Lot 3, GREENGUARD®, RoHS-compli	ant.
Ethernet	Gigabit ethernet, F	Realtek R	L8111GN, Wake	on LAN	®			TUV low noise verified (on some models)	
Modem	None		<u> </u>				Accessories	For compatible accessories, please go to	nttp://www.lenovoquickpick.com
Manageability Security chip	None TPM (Trusted Platt * Downgrade to TF				G Win7 32 OS				
	. 3						1		













ThinkCentre 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	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 M715 SFF Platform Specifications

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













ThinkCentre M720 SFF Platform Specifications

Processor	Intel® Celeron®, Intel 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 a colla a a coll	mouse only, blocks all storage devices		
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	M	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
Memory	64GB may LIDIMM D	DB4-266	66 four 288-nin	DIMM sc	ockets non-ECC		Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
Wemery	64GB max, UDIMM, DDR4-2666, four 288-pin DIMM sockets, non-ECC, dual-channel capable* * System automatically clocks down for the processors with lower memory controll					v controller		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, bla 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	rive (SSD te Drive (Ie 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	4ta 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), PCle 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), PCIe 3.0 x1		
	supports 3 independe							Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WI AN, one for SSD/Optane)		
	Some: NVIDIA Gefor	ce GI / 35 watte	two DisplayPort	רוט to 3 זטectX טונפ	. 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									
Manikan aalals	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					tor 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 dorigle		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).	- Duals and	Some: 1-year or 3-year, limited onsite service / service upgrades available		
. , ,	1x microphone (3.5mr	m), 1x he					Preload	Preloaded operating system		
Front ports* (Opt.) Rear ports* (Std.)	Optional: 1x media rea 4x USB 2.0, 1x serial	ader	•		, ,		Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Preloaded applications (only some listed)			
	1x line-out (3.5mm)						Lenovo Vantage			
Hear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCI2 x1**, 2x U	SB 3.1 T	ype-C Gen2 via F		Microsoft Office preloaded;			
	(special bid only), 1x 2 pin), 2x PS/2 ports (ke	∠na seria evboard/r	ı (ə-pin), 4x seria nouse), addition:	u (9-pin) al B.I-45	and video ports	arallei (25- wailahle on		purchase a product key to activate		
	optional graphics or e			A1 1 10 +3	and video ports a	evaliable Of		Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD+PW)		
	* Depending on many fac	ctors, actua	al data transfer spe			ical speed		 Cyberlink Power2GO (only for models with DVD±RW) LinkedIn 		
	** Choose either 2x USB						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,		
	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				
	* 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.)	optional two USB 2.0.										
	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	AMD A6 / A8 / A10	/ A12 and	d Ryzen 3 /	5 / 7 series	processor		Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®		
-		Cores / Threads	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)		
	Processor		(Base/Max)	Cache	Support Graphics	Integrated Graphics	Manageability	DASH 10/1.1		
	PRO A6-9500	2/2	3.5 / 3.8	1MB	(Up to) DDR4-2400	Radeon R5	Security chip	Discrete TPM 2.0, TCG Certified		
	PRO A6-9500 PRO A8-9600	4/4	3.5 / 3.8	2MB	DDR4-2400 DDR4-2400	Radeon R5	Security features	Security slot (in rear for optional Power-on password		
	PRO A10-9700	4/4	3.5 / 3.8	2MB	DDR4-2400	Radeon R7		Kensington® MicroSaver® cable) ● Administrator password		
	PRO A12-9800	4/4	3.8 / 4.2	2MB	DDR4-2400	Radeon R7		Padlock loop Hard disk password Past assumes central		
	Ryzen 3 2300X	4/4	3.5 / 4.0	+	DDR4-2933	None		Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard and mouse		
	Ryzen 5 2500X	4/8	3.6 / 4.0		DDR4-2933	None		Optional cable lock to physically lock Individual USB port disablement		
	Ryzen 3 PRO 2200G	4/4	3.5 / 3.6	2MB / 4MB		Radeon Vega 8		both keyboard and mouse • Optional chassis intrusion switch		
	Ryzen 5 PRO 2400G	4/8	3.6 / 3.8		DDR4-2933	3 Radeon RX Vega 11	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	Ryzen 5 PRO 2600	6 / 12	3.4 / 3.9	3MB / 16MB		None	l to j z o a. a	Some: Lenovo Traditional Keyboard (USB connector), black		
	Ryzen 7 PRO 2700	8 / 16	3.2 / 4.1	+	DDR4-2933	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
Mamani	64GB max, UDIMM	DDD4 0)CCC* form	200 nin DIM	M applicate in	an FCC	Mauga	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)		
Memory	dual-channel capab		2000 , IOUI 2	200-bili Dilvi	ivi sockets, n	on-ECC,	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black		
	* Systemboard supp		o DDR4-26	66. memory	frequency n	nav automatically		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black		
	clocks down for the							Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Storage	Some: Hard Drive						Mechanical	SFF (8.4L), black color; metal case		
	Some: Solid State	Drive (SS	SD) / SATA 6	3.0Gb/s, 2.5		- P	iviculalillal	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm		
	Some: M.2 SSD / F	PCIe NVN	/le, PCIe 3.0) x 4*, 32Gb	/s			• Approx. 13.2 lb (6.0 kg), weight may vary by configuration		
	* 128GB SSD M.2 (nd AMD A6	/ A8 / A10 / .	A12 processor only		Toolless cover, disk, optical removal		
Ontical	supports PCIe 3.0 x Some: DVD-ROM	(2, 16GD	/S Ch/o Drivo	olim (0 0mn	2)			Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD		
Optical	Some: DVD-NOIVI	3AIA 1.3 r (DVD+F	RW) SATA 1	566/s Driv	ı) e. slim (9.0m	nm)				
Onboard SATA	Some: DVD Burner (DVD±RW), SATA 1.5Gb/s Drive, slim (9.0m Three onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAI							Bay 2: 3.5 , filernal, HDD/SSD (bay only comes with 2.5" 2nd disk)		
	available via special bid model) Optional 7-in-1 media reader							Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16		
Media reader								Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1		
Graphics	AMD Radeon™ Gra	aphics in	processor	(only for so	me process	ors), uses main		Slot 3: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1 Slot 4: low-profile (length < 150mm, height < 68mm), PCl 3.0		
	memory, DirectX® 1	2, one VO	GA, two Dis _l	olayPort™ (C	Onboard VG/	A and DP ports				
	are only available on the models with integrated graphics), supports 3 independent displays, works along with AMD discrete graphics to support more displays;					orts 3 independent	Floor Stand	M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation		
	displays, works along with AMD discrete graphics to support more displays; Max resolution: 4096x2160 (DP)@60Hz; 1920x1200 (VGA)@60Hz									
	Some: NVIDIA Geforce GT 730, DirectX 12, 2GB GDDR5, PCIe 2.0 x16 (x8 elec					le 2.0 x16 (x8 elec.)	Power supply	Some: 180 watts, autosensing, 85% PSU		
	adapter, two DisplayPort, 35 watts;							Some: 210 watts, autosensing, 85% PSU (only available via special bid) 260 watts, autosensing, 92% PSU (only available via special bid)		
Mandanashi	Max resoluti	on: 3840:	x2160 (Disp	olayPort)@6	0Hz		1			
Monitor cable	Optional DP to VGA dongle, DP to DVI-D dongle, DP to dual DP dongle, or DP to HDMI 1.4 dongle						Limited warranty 1-year or 3-year, limited onsite service / service upgrades available Preload Preloaded operating system			
Chipset	AMD B450 Chipse						Preload	Preloaded operating system Some: Windows 10 Pro 64-bit		
<u> </u>	2x USB 3.1 Gen2, 2		1 Con1 1v	miorophone	(2 Emm) 1	v haadahana	-	Some: Windows 10 Home 64-bit		
From ports (Std.)	(3.5mm)	X USD 3	. i Geiii, ix	microphone	e (3.5HIII), T	x rieaupriorie		Preloaded applications (only some listed)		
Front ports* (Opt.)	Optional: 1x media	reader, 2	x USB 3.1 T	vpe-C Gen2	via PCIe ca	rd (special bid only)		Lenovo Vantage		
Rear ports* (Std.)	2x USB 3.1 Gen1, 2	x USB 2	.0, 1x serial	(9-pin), 1x e	ethernet (RJ	-45), 1x VGA**,		Microsoft Office preloaded; purchase a product key to activate		
	2x DisplayPort**, 2x			rd / mouse);	1x line-in (3	.5mm), 1x line-out		Cyberlink PowerDVD (only for models with DVD / DVD±RW)		
Poor porto* (Opt.)	(3.5mm), 1x microp			in) 1y nara	llol (OE pip)	additional D I 45		Cyberlink Power2GO (only for models with DVD±RW)		
near ports (Opt.)	Optional: 2x USB 2 and video ports ava	.∪, TX ∠N ilable on	ontional ara	nn), ix parai	ernet card	audilional HJ-45		• LinkedIn		
	* Depending on many	factore ac	tual data tran	efor enoud me		an theoretical speed	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);		
		* only available on the models with integrated graphics				·		ErP Lot 3; RoHS-compliant		
Audio support	High Definition (HD) Audio, Realtek ALC662 / optional internal speaker (1 watt)						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com		
WLAN				k RTL8821C	E (dual ban	d),				
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band				c ∩CΔ0377/	(dual hand)				
	Wi-Fi + Bluetooth 4.2* combo adapter, 1x1			i (uuai vailu),						
	Some: 11ac wireles	ome: 11ac wireless, M.2 Card, Realtek RTI 8822BF (dual band).				d),				
	Wi-Fi + Blue	etooth 4.2	2* combo ac	lapter, 2x2						
	Some: 11ac wireles	ss, M.2 C	ard, Qualco	mm Atheros	s QCA6174 <i>A</i>	A (dual band),				
Bluetooth™	Wi-Fi + Blue Some: Bluetooth 4.	etooth 4.2	2* combo ac	apter, 2x2	RT combo	adantor				
Diuelooth	* Hardware support									
	i lai avvai o ouppoi i	J J 1 7.2,	Dat William	co ana ca	mor ormy out	/PO.10 D1 7.1	J			













ThinkCentre M75s-1 SFF Platform Specifications

Processor	AMD Athlon PRO and Ryzen 3 / 5 / 7 PRO series processor						Ethernet	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®		
		Cores /	Frequency	L2/L3	Memory	Integrated	Ethernet (Opt.)	None		
	Processor	Threads	(Base/Max)	Cache	Support (Up to)	Graphics	Manageability	DASH 10/1.1		
	Athlon PRO 300GE	2/4	3.4 / 3.4	1MB / 4MB	DDR4-2666	Radeon Vega 3	Security chip Security features	Discrete TPM 2.0, TCG Certified • Security slot (in rear for optional • Power-on password		
	Ryzen 3 PRO 3200G	4/4	3.6 / 4.0	2MB / 4MB	DDR4-2933	Radeon Vega 8	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		
	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, DDR4-2666*, four 288-pin DIMM sockets, non-ECC, dual-channel capable * Memory may be underclocked to DDR4 -1866, DDR4-2133, or DDR4-2400 for the lower capability of memory controller in processor						Keyboard Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black		
Storage	Some: Hard Drive / Some: M.2 SSD (2)	242 / 228	30) / PCIe N'	VMe, PCIe :	3.0 x2 or PC	00 rpm le 3.0 x4		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Optical	Some: DVD-ROM Some: DVD Burner					nm)	Mechanical	• SFF (8.4L), black color; metal case		
	Three onboard SATA	4 6.0Gb/	s connectors	s, RAID 0/1	support (RA	ID ['] preset only	INIECHANICAI	 (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 		
	available via special									
	Optional 7-in-1 media reader AMD Radeon™ Graphics in processor (only for some processors), uses main							 Toolless cover, disk, optical, and extension card removal Optional dust filter 		
	memory, DirectX® 12, one VGA, two DisplayPort™ (Onboard VGA and DP ports are only available on the models with integrated graphics), supports 3 independen displays, works along with AMD discrete graphics to support more displays; <i>Max resolution:</i> 4096x2160 (DP)@60Hz; <i>Some:</i> AMD Radeon™ 520, DirectX 12, 2GB GDDR5, PCIe 3.0 x8 adapter, two DisplayPort, 30 watts (Max); <i>Max resolution:</i> 4096x2160 (DP)@60Hz Optional DP to VGA, DP to DVI-D (single link), DP to dual DP, or DP to HDMI 1.4						- 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 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		
, ,	Front ports* (Std.) 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x microphone (3.5mm), 1x headphone (3.5mm) Front ports* (Opt.) Optional: 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) Audio, Realtek ALC662 / optional internal speaker (1 watt)						Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models);		
WLAN	Some: 11ac wireles	s, M.2 C	ard, Realtek	RTL8822C	E (dual band	d),	Acception	ErP Lot 3; RoHS-compliant, WEEE		
	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 20		













ThinkCentre M910 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5 /	/ i7 Processor	Security features	Security slot (in rear for optional Power-on password				
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)			Kensington® MicroSaver® cable) • Padlock loop • Administrator password • Hard disk password				
	Core i5-6500	4 / 4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Smart USB protection, allows keyboard/ Boot sequence control 				
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		 mouse only, blocks all storage devices Optional cable lock to physically lock Boot without keyboard and mouse Individual USB port disablement 				
	Core i3-7300	2/4	4.0G /	4 MB	DDR4-2400	HD 630		 Optional cable lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch 				
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black				
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	rtcyboard	Some: Lenovo Traditional Keyboard (USB connector), black				
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	Mauro	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black				
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black				
Memory	64GB max, UDIMN dual-channel capa * System automatic	bĺe	'		,	•	Mechanical SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 11.92 lb (5.4 kg), weight may vary by configuration					
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" IVMe, P	Cle 3.0 x 4, 32Gb	/s		 Toolless cover, disk, optical, graphic card removal Optional dust filter Bay 1: Slim external ODD bay 				
Optical	Some: Intel Optan Some: DVD-ROM Some: DVD Burne	1 SATA 1.5 er (DVD±l	5Gb/s Drive, slim RW). SATA 1.5G	(9.0mm b/s Drive) . slim (9.0mm)			Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16*				
Onboard SATA	Four onboard SATA available via specia	A 6.0Gb/s al bid mod	connectors, RAI del)	ID 0/1 su	pport (RAID pres	et only		Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1* Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal)*				
Media reader	Optional 7-in-1 me						-	Slot 4: no slot, only bracket for optional port extension* M.2 card slots: Two (one for WLAN, one for SSD/Optane)				
Graphics	one VGA, two Disp discrete graphics to	olayPort™, o support	, supports 3 inde more displays;	pendent	displays, works a			*Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 (x4 signal) slot optional rear 2x USB2.0 / parallel / 2nd serial / cable lock / Wi-Fi antenna occupies one expansion slot				
	Max resolution: 409 Some: NVIDIA Ge	96x2304 ((DP) @ 60Hz; 204 T 730 Direct Y 17	18x1536	(VGA)@50Hz PCIo 2 0 v8 adapt	or	Floor Stand	Optional system floor stand for vertical orientation				
	two Display			2, 2GD, F	Cie 2.0 xo auapi	ei,	Power supply	Some: 180 watts, autosensing, 85% PSU				
Monitor cable		ition: 3840	x2160 (DisplayP	ort)@60 k), DP to	Hz; dual DP, or DP to	HDMI 1.4	Tower suppry	Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)				
Chipset	Intel Q270 Chipse	et					Limited warranty ³ Some: 1-year or 3-year, depot service / service upgrades available					
Front ports*	Four USB 3.1 Gen				en 2 (only availabl	e via special	Some: 1-year or 3-year, limited onsite service / service upgrades av					
Rear audio ports	bid), microphone (3 Four USB 3.1 Gen optional parallel (2 PS/2 ports (keyboa additional DisplayF Line-in (3.5mm), lir	11, optiona 5-pin), eth ard/mouse Port on op	al two USB 2.0, s nernet (RJ-45), o e); tional graphics o	eríal (9-p ne VGA, n some l	two DisplayPort, models	serial (9-pin), optional two	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processes) Preloaded applications (only some listed) Microsoft Office preloaded; purchase a product key to activate - Only for Window 10				
IEEE 1394*	None * Depending on many					retical speed		some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Lenovo Companion - Only for Window 7 Lenovo Companion - Only for Window 7 Lenovo Solution Center				
Audio support	High Definition (HD				<u> </u>	<u> </u>	-	 Lenovo ThinkVantage Tools 				
WLAN ¹³	Some: 11ac wirele Wi-Fi + Blu Some: 11ac wirele	ess, M.2 (uetooth 4. ess, M.2 (Card, Qualcomm 1 combo adapte	Atheros r, 1x1 Atheros	QCA9377A (dual	l band),		 Create Recovery Media Adobe® Reader® Cyberlink PowerDVD Create (DVD±RW) 				
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Band Wir r, 1x1				ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,				
	Some: 11ac wirele Wi-Fi + Blu		Card, Intel Dual E 1 combo adapte		eless-AC 8265,			TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com				
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Band Wir r, Intel vF	Pro technology su	pport, 2x2	, 1000001100	. o. ospanore accessorios, piedes go to international ordinational				
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None											
Manageability Security chip	Intel vPro technolo adapter to enable v TPM (Trusted Platf	tel Active Management Technology 11.0 (Intel AMT 11.0); tel vPro technology on some models (require choosing a vPro-support Wi-Fi lapter to enable vPro function through wireless connection) PM (Trusted Platform Module) 2.0, TCG Certified Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS	Pro technology on some models (require choosing a vPro-support Wi-Fi er to enable vPro function through wireless connection) (Trusted Platform Module) 2.0, TCG Certified									





















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 3.1G / 5.0G	12 MB	DDR4-2666	UHD 630 UHD 630	1	Some: Lenovo Traditional Keyboard (USB connector), black			
	Core i9-9900	8 / 16		16 MB	DDR4-2666			Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
Memory	64GB max, DDR4-26 * System automatical						Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black			
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 Solid 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 support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
Optical	* 128GB SSD M.2 (2: Some: Intel Optane ^T Some: DVD-ROM, S	242) PCI 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 rce® GT 7 35 watts, r™ 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	olayPort,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	1x line-out (3.5mm)) <i>Optional:</i> 2x USB 2.0	. 2x USB	3.1 Gen1 via PC	le x1, 2x	USB 3.1 Type-C	Gen2	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant			
	via PCIe x4 (special I 1x parallel (25-pin), 2 USB3.1 Type-C Gen additional RJ-45 and * Depending on many fa	oid only), xx PS/2 po 2 / Displa video poi	1x 2nd serial (9- orts (keyboard/m yPort) via PCIe o ts available on c	pin), 4x s ouse), 1: <4 (availa ptional g	serial (9-pin) via F x Thunderbolt 3 (o able on 09/30/201 graphics or ethern	PCIe x1, combo 8), et card	Accessories				























ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo
	ADII		Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), black color; metal case • Toolless chassis open (for models with optional toolless chassis screw)
	A9-9420e	2	1.8 / 2.7 GHz	1 MB	DDR4-1866	Radeon R5 Series		Toolless HDD, SSD, memory, Wi-Fi removal
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower cap	pability of memory		 Optional dust filter M625 Tiny only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H
Disk	Some: SATA 6.0 Some: 128GB N Some: 256GB N	1.2 Solid	State Drive (SS	D) / PC	le NVMe interl	ace	VESA mount Floor Stand	2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation
Optical Onboard SATA	None one SATA 6.0Gb	/s conne	ctor on planar				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
Media reader	None		•				Limited warranty ³	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available
Graphics	Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; e-C)@6) Type-C with [280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit listed) Some: Windows 7 Professional 64 preinstalled through downgrade Preloaded applications (only some listed) - Windows 10 only - Lenovo Vantage
Monitor cable	Optional DP to V		to DVI-D (single	link), or	DP to HDMI 1	.4 dongle		rights in Windows 10 Pro 64-bit • LinkedIn • Microsoft Office preloaded;
Chipset	AMD SoC platfo							purchase a product key to activate
Front ports*	Two USB 3.1 Ge one headphone	n1 (one	is Always On ar	nd fast cl	narge), one mi	crophone (3.5mm),		- Windows 7 only ■ Lenovo Solution Center
Rear ports*	One USB 3.1 Ge two optional port Alternate Mode), * Depending on ma	en1, three s (Port 1 Port 2 fo	e USB 2.0, ethe for VGA / serial or serial)	rnet (RJ I / USB 2	-45), two Disp 2.0 Type-C (wit	layPort, th DisplayPort than theoretical speed		 Lenovo System Update Factory Recovery User Guide Viewer Microsoft Office preloaded;
I/O box	None	15) 4 1	D 11 1 41 0	200 1/00		. (4.5)		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, TCG Certified *Security slot (in rear for optional Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/mouse only, blocks all storage devices Power-on password *Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse individual USB port disablement Chassis intrusion switch							























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, oe-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	Boot sequence		
	Pentium Gold 5405U	2 / 4	2.3G	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security leatures	 Security slot (in re Kensington® Micro 	e control eyboard 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 keeping 				
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	yboard Some: Lenovo Calliope Keyboard (USB connector), black				
Storage	Some: Hard Drive / S	ATA 6.00	ab/s, 2.5", 5400 r	rpm or 7			Mouse					
	Some: Solid State Dr Some: M.2 SSD (228				PGh/s		Mechanical	Tiny (1L), black color; metal case				
	Some: M.2 SSD (224							Optional dust filte Ope 2.5" hav for l		clote (one for WI AI	N, one for M.2 SSD)	
Onboard SATA	One onboard SATA 6.							Office 2.5 bay for i	·	·	· ,	
Graphics	Intel HD Graphics 61					12, one			+	ns (WxDxH)	Weight (Approx.)	
	DisplayPort™, one HD							Tiny only		20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config	
Monitor cable	Max resolution: 4096x Optional DP to VGA d	onale or	DP to HDMI 1.4	.2304 (n donale	DIVII) @ 24 HZ			0 11 11/504			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Chipset	Intel SoC (System or	n Chip) p	latform				VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation				
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	t 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 password Individual USB port disablem Chassis intrusion switch 						
	Pentium G4600T	2/4	3.0G	3 MB	DDR4-2400	HD 630	Kaybaard	Some: Lenovo Calliope Keyboard (USB connector), black						
	Core i3-6100T	2/4	3.2G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calli	tional Keyboard (USB connector), blac	K ack				
	Core i5-6500T	4/4	2.5G / 3.1G	6 MB	DDR4-2133	HD 530		Some: Lenovo Callid	ope Wireless Keyboard (2.4GHz via	USB receiver), black				
	Core i7-6700T	4/8	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Callid	ope Mouse (USB connector), black	<i>,</i> .				
	Core i3-7100T	2/4	3.4G	3 MB	DDR4-2400	HD 630		Some: Lenovo Callid	ope Wireless Mouse (2.4GHz via US	B receiver), black				
	Core i5-7400T	4/4	2.4G / 3.0G	6 MB	DDR4-2400	HD 630	Mechanical	Tiny (1L), black color						
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2400	HD 630		Toolless chassis on						
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630		 Toolless HDD, SSE Optional toolless c 						
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630		 Optional dust filter 	nassis screw					
Memory	32GB max, DDR4- dual-channel capa		o 260-pin SO-DI	MM sock	ets, non-ECC,			M740 Time and	Dimensions (WxDxH)	Weight (Approx.)				
Ctorogo	* System automatic	cally clock				ory controller		M710 Tiny only	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.91 lb (1.32 kg), vary by config				
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	Drive (S	SD) / SATA 6.0Gb	o/s, 2.5"		le.		With VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	3.66 lb (1.66 kg), vary by config				
Optical	Some: Intel Optan Some: DVD-ROM	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		With VESA mount & I/O box	3.66 lb (1.66 kg), vary by config					
•	Some: DVD Burne	er (DVϱF	RW), slim (9.0mm			box	VESA mount	Optional VESA mour						
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 Professional 32/64 preinstalled through downgrade						
Chipset	Intel B250 Chipse	et						rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processor) Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit						
Front ports*	Two USB 3.1 Gen1	(one is A	Ilways On and fa	st charge	e), one microphor	ne (3.5mm),								
Rear ports*	one headphone / n Four USB 3.1 Gen or two specific USB	1 (optiona	ıl external optical	box or e										
	two optional ports (with DisplayPort A	(Port 1 for Iternate N	VGA / 3rd DP / I lode), Port 2 for	HĎMI / s serial)	erial / USB 3.1 Ty	pe-C Gen 1		Preloaded applicati listed) • Microsoft Office pr	, ,					
I/O box*	Optional external 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	For compatible accessories, please go to http://www.lenovoquickpick.com						

See footnotes for more detailed information













ThinkCentre M715 Tiny (2nd Gen) Platform Specifications

Processor	AMD Athlon, A6, A1	0, A12,	or Ryzen pro	cessor			Security features	Security slot (in rear for optional Administrator password			
	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			
	PRO A6-8570E	2/4	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black			
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	.,				
	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 ** 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), or Rvz	en processor				Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	APU Athlon PRO 200GE	Cores / Threads	Frequency Base/Max 3.2 GHz	L2 / L3 Cache	Memory Sup- port (Up to) DDR4-2666	Integrated Graphics Radeon Vega 3	Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB / -	DDR4-2400	Radeon R5		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB / -	DDR4-2400	Radeon R7	Mechanical	Tiny (1L), black color; metal case
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB / 4MB	DDR4-2933	Radeon Vega 8		 Toolless chassis open (need optional toolless chassis screw) Optional dust filter
Memory	8GB max, DDR4 266 * System automatical							M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H
Disk Optical	Some: 32GB M.2 So Some: 128GB M.2 S None	olid State Solid Stat	e Drive (SSD) te Drive (SSD	/ SATA inte 0) / PCIe N\	erface VMe, PCIe 3	.0 x 2	VESA mount	179mm W X 182.9mm D X 34.5mm H 2.91 lb (1.32 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm
Onboard SATA	One SATA cable (1-d	rop to de	evice), one S	ATA 6.0Gb/s	s connector	on planar	Floor Stand	Optional system floor stand for vertical orientation
Graphics	AMD Radeon™ Gra		,.				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
·	DisplayPort™, one or	tional po	ort (HDMI, VC	A, or 3rd D	P), supports	3 independent	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available
	displays (supports m port or DP to DVI/HD Max resolution: 4096	MI dong x2160 (E	les, and Athlo DP)@60Hz; 4	on / Athlon I	PRO onlý su	pport 2 displays);	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise
Monitor cable	1920 Optional DP to VGA		/GA)@60Hz	longlo or D		1 4 donalo		Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Chipset	AMD B300 Chipset	uorigie, L		Jorigle, or D	P 10 HDIVII	1.4 dorigie	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant
, , ,	Two USB 3.1 Gen1 (3.5mm), one headph	one / mid	crophone cor	nbo jack (st	éreo, 3.5mm	1)	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)
Rear ports* (Std.)	One USB 3.1 Gen1 a	and three	e USB 2.0, et	nernet (HJ-	45), two Dis	olayPort,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Rear ports* (Opt.)	One optional port (VC * Depending on many fa ** Not support VGA, 3rd	ctors, act	ual data transfe	er speed may	be lower than	theoretical speed		3
Audio support	High Definition (HD)	Audio, R	ealtek ALC23	33-VB2 / int	ernal speak	er (1.5 watt)		
WLAN	Some: 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet 11ac wireless Wi-Fi + Bluet Some: 11ac wireless Wi-Fi + Bluet Some: Bluetooth 4.2	cooth 4.2 s, M.2 Ca cooth 4.2 s, M.2 Ca cooth 4.2 s, M.2 Ca cooth 4.2 2* wireles	* combo ada ard, Qualcom * combo ada ard, Realtek I * combo ada ard, Qualcom * combo ada ss, integrated	oter, 1x1 Im Atheros oter, 1x1 RTL8822BE oter, 2x2 Im Atheros oter, 2x2 In Wi-Fi + I	QCA9377 (c E (dual band QCA6174A BT combo a	lual band),), (dual band), dapter		
Bluetooth Ethernet	* Hardware supports Gigabit ethernet, Rea					OORS B1 4.1		
Manageability Security chip Security features	DASH 1.0/1.1 Discrete TPM 2.0, TO			- A almainte	lunkau mas	المسما		
Coounty locatores	 Security slot (in rea Kensington® Micros Padlock loop Smart USB protect mouse only, blocks Power-on password 	Saver® ca ion, allov all stora	able) ws keyboard/	Hard disBoot secBoot witIndividual	trator passw sk password quence cont hout keyboa al USB port intrusion sw	rol rd 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® MicroSaver® cable) Chassis intrusion switch Power-on password Boot without keyboard and monormal limit in Individual USB port disablements Smart USB protection, allows 				
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610						
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		Administrator password Administrator password Mouse only, blocks all storage of the				
	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 Tradi	tional Keyboard (USB connector), bla	ack	
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callio Some: Lenovo Callio	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			,			
						OHD 630	<u> </u>	- · ,		ns (WxDxH)	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 185.38mm X 63mm vary by			vary by config	
	Some: Solid State Dr Some: M.2 SSD / PC						VESA mount	Optional VESA mour	nt bracket kit, sup	ports VESA 75mm a	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 Some: Windows® 10 Pro 64-bit				
	Max resolution: 4096x					p, c,						
					48x1536 (VGA)			Some: Windows 10		linta al\		
Monitor cable	Optional DP to VGA d					(for Collage		 Preloaded applications (only some listed) Lenovo Vantage Microsoft Office preloaded; 				
	Display with intel integ	grated gra	apriics), or DP to	ו וואוטח	.4 dongle		4					
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	ures • Security slot (in rear for optional			
	Processor	Cores / Threads	Frequency Base/Max	L2 / L3 Cache	Memory Support (Up to)	Integrated Graphics		 Kensington® MicroSaver® cable) Smart USB protection, allows keyboard/ 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 model Some: 135 watts adapter, autosensing, 88% PSU (not included for TIO model)			
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 Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black					
	Core i7-7700T 4 / 8 2.9G / 3.8G 8 MB DDR4-2400 HD 630	Mouse	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					
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		 Toolless HDD, SSD, memory removal Optional toolless chassis screw Optional dust filter 					
Optical	Some: DVD-ROM, slim (9.0mm), via USB external ODD box		Dimensions (WxDxH) Weight (Approx.)					
Onboard SATA	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	rranty ³ 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, Shortness, 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 4.2/5.0 wireless, integrated in Wi-Fi + BT 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, TCG 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		 Kensington® Micro Chassis intrusion s 		Boot without key Individual USB;	/board and mouse
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Power-on passwor			ection, allows keyboard/
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		 Administrator pass 	sword		cks all storage devices
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		 Hard disk passwor 			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calli			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradi Some: Lenovo Calli	itional Keyboard (L	JSB connector), bla	CK ISB rocciver) black
	Core i7-8700T	6 / 12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB (connector), black	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			le), two M.2 slots (one		
	Core i9-9900T	8 / 16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630					d are mutually exclusive
Memory	32GB max, DDR4-266								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 Processo D box	or), M.2	VESA mount Floor Stand	Optional VESA mour Optional system floo			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			
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	MI, one o	optional video po	rt (2nd F	HDMÍ, VGA, 2nd	DP,		Some: 90 watts AC/DC adapter, autosensing, 88% PSU Some: 135 watts AC/DC adapter, autosensing, 88% PSU			
	or USB 3.1 Type-C Ge Max resolution: 4096x	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-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	Optional DP to VGA d	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 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	77			le], High Temperature,
	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	ρυιι, Δ ΧΔ					



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pen	itium®, or 8	th / 9th Gen Intel C	Core™ i3	/ i5 / i7 / i9 Processo	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 d 5120x2880@60Hz ((up to 2 Mini Disp	layPort);	
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	1	Ontional DP to VGA don	4096x2160@60Hz ((up to 4 Mini Displigle, DP to DVI-D dongle, DP to dual DP of	layPort) Hongle (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	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.)*	·	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	ays On and last charge), one 03B 3.1 Ty 1), 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	SB 3.1 Gen1, 1x ethernet (RJ-45), 1x DP,	1x HDMI	
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Rear ports (Opt.)*	Two optional ports (mutu	ually exclusive with PCIe card): Port 1 for Gen 1 with DP function); Port 2 for serial;	VGA / 2nd DP / 2nd HDMI /	
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	Optional ports via PCIe	card: 2x USB 3.1 Gen1 via PCle x1, 4x s	erial (9-pin) via PCle x1. 1x	
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo U	ISB3.1 Type-C Gen 2 / DP) via PCle x4	,	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		,	ctors, actual data transfer speed may be	<u>'</u>	
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / o	ptional internal speaker (1.5 watt or 2 wa	tt)	
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN	Some: 11ac Wi-Fi + B	Γ 4.2, M.2 Card, Realtek RTL8821CE (du	al band), 1x1	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + B	T 4.2, M.2 Card, Realtek RTL8822BE (du	ial band), 2x2	
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	-		T 4.2, M.2 Card, Intel Dual Band Wireless T 4.2, M.2 Card, Intel Dual Band Wireless		
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + B	T 5.0. M.2 Card. Intel Wireless-AC 9560 (
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	1	Intel vPro techr	nology support, 2x2	· · · · · · · · · · · · · · · · · · ·	
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Bluetooth Ethernet	Some: Bluetooth 4.2/5	i.0 wireless, integrated in Wi-Fi + BT com thernet Connection I219-LM(Jacksonville	bo adapter \ Wake on I AN®	
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400 DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Se	erver Adapter I350-T4, gigabit ethernet, 4	x RJ-45, PCle x4	
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2400 DDR4-2666	UHD 630	Manageability		t Technology 12 (Intel AMT 12);		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on	some models (require choosing a vPro-	support Wi-Fi	
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Coourity obin	adapter to enable vPro f Discrete TPM 2.0, TCG	unction through wireless connection)		
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security chip Security features	Security slot (in rear form)		a matural	
	Celeron G4930T	2/2	2.9G 3.0G	2 MB	DDR4-2400 DDR4-2400	UHD 610	- Cooding router of	Kensington® MicroSav			
							-	 Chassis intrusion swite 	ch • Individual USB po	dividual USB port disablement	
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610	4	 Power-on password 	n password • Smart USB protection, allows keyboard/		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	4	Administrator password mouse only, blocks all storage devices Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black			
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630	Koyboord				
	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 print Mouse (USB connector), Windows H	Ialla aupport, black	
	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 rece	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/CC	SD and DCIa 2.0 v0 alat (law profile), thre	as M.O. slata (and 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	[[]		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 be	racket kit, supports VESA 75mm and 100		
Storage	Some: Hard Drive / SA			r 7200 rp	m				Optional system floor stand for vertical orientation		
	Some: Solid State Drive	e (SSD) / S	SATA 6.0Gb/s, 2.5"		DCIo 2 0 v 4* 22Ch	No.	Power supply	 135 watts AC/DC adapter, autosensing, 88% PSU Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available 			
	Some: M.2 SSD (suppo RAID 0/1 suppo * 128GB SSD M 2 (2242)	rt (RAID n	reset only available	via spec	cial bid model))/S,	Limited warranty				
	* 128GB SSD M.2 (2242) Some: Intel Optane™ N	lemory (no	t support Celeron	/ Pentiun	n Processor), M.2		Preload	Some: Windows® 10 I	Pro 64-bit		
Optical	Some: DVD-ROM, slim Some: DVD Burner (DV	(9 0mm)	via USB external C	DD box					Some: Windows 10 Home 64-bit		
Onboard SATA	One onboard SATA 6.0G	b/s connec	tor				Environment		PEAT™ Gold rating (North America), ErP fied (coming soon, on some models), Rol		
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), up	2nd DP, p to 3 ind	lependent displays;	splayPort™,	MIL-SPEC test	MIL-STD-810G military of Low Temperature, Te	certification (Low Pressure [Altitude], Hig erature Shock, Humidity, Sand and Dust,	h Temperature, Vibration, Shock, Fungus,	
		216Ò (ońbo	ard HDMI)@24Hz	2048x1	536 (VGA)@50Hz		Accessories	For compatible accessor	ries, please go to http://smartfind.lenov	o.com	

















ThinkSmart Edition Tiny M920q for Zoom Rooms Platform Specifications

Processor					Keyboard Lenovo Traditional Keyboard (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	
							1		Dimensions (WxDxH)	Weight (Approx.)
Memory	16GB (8GB x 2) DDR4-2666, two 260-pin SO-DIMM sockets, dual-channel capable 128GB SSD M.2 (2242) PCIe NVMe only supports PCIe 3.0 x 2, 16Gb/s					_	Tiny only 7.05" X 7.20" X 1.36" 2.91 lb (1.32			
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		t kit, supports VESA 75mm and 100m	nm
Graphics	Intel HD Graphics 63						Floor Stand	<u>'</u>	or stand for vertical orientation	
	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		
Front ports (Std.)	* one USB 3.1 Gen1 (A						Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, TUV ultra low noise verified (on some models), RoHS-compliant		
Rear ports (Std.)	one microphone (3.5mm), one headphone / microphone combo jack (3.5mm) ports (Std.)* 2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 2x HDMI * Depending on many factors, actual data transfer speed may be lower than theoretical speed			MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Sh Fungus, Solar Radiation)					
Audio support	Realtek ALC233VB2 /	optional i	internal speake	(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 Management Technology 12 (Intel AMT 12); Intel vPro technology on some models (require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection) Discrete TPM 2.0, TCG Certified									
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 • Smai	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:	P330 / P320 / M920(x) / M720 / M910(x) / M710 / M900(x) / M700 / M630e						
	M625 / M600 / M75q / M715 / M93/p* / M83 / M73* / M53 /Chromebox Tiny * Non-TIO models can't be turned on by pressing power button of TIO						
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight						
Viewahla imaga siza			A, PLS, and IPS panels				
Viewable image size Max view area (W x H)	21.5" (546.1mm) d 18 74" x 10 54" / 4	76.1mm x 267.8mm					
Bezel Width	Top / Side: 2mm, B						
Native resolution	1920x1080	10.1					
Multi-touch Aspect ratio	Optional 10-point n	nulti-touch, supports W	ake on louch				
Pixel pitch (mm)	0.24795mm						
Dot/Pixel per Inch	102.4 dpi						
Brightness	250 nits or cd/m ² (t	ypical)					
Contrast ratio Pixel response time	1000:1 (typical)	er drive to 4ms, 6ms					
Color gamut	72%	or drive to 4mo, eme					
Anti-reflective	Anti-glare						
Viewing angle at 10:1 CF	R178° (+/- 89°) horiz	contal, 178° (+/- 89°) ve	ertical				
Preset resolutions	640x350 @ 70Hz	CCLI- 70LI- 75LI-					
	640x480 @ 60Hz, 720x400 @ 70Hz	66HZ, /2HZ, /5HZ					
	800x600 @ 60Hz,	72Hz, 75Hz					
	1024x768 @ 60Hz	, 70Hz, 75Hz					
	1152x864 @75Hz						
	1280x800 @ 60Hz 1280x1024 @ 60H						
	1366x768 @ 60Hz						
	1440x900 @ 60Hz						
	1600x1200 @ 60H 1680x1050 @ 60H						
	1920x1080 @ 60H						
Presets / user settings	Presets: 25; user s						
On screen display		with digital user contro					
Control features	Ftont: Exit button	n, Left / Mode-switchin	g button (TIO / monitor mode),				
		o button, Volume down	Menu button, Power button				
Tiny-in-One Power On			Power button positioned on TIO				
. (=10)	can turn on both TI	O and Tiny (only some	Tiny support, see compatible list)				
Side ports (TIO)			3 or M53 installed or USB 2.0				
	connected via USE Notes: The USB p		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	P330 / P320 / M920(x) / M720 / M910(x) / M710 / M900(x) / M700 / M630e / M625 / M600 / M75q / M715 / M83 / M53 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		Switching technology**				
Viewable image size	Notes: In-Plane Switching may refer to VA, PLS, and IPS panels 23.8" (604.7mm) diagonal					
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 1280x1024 @ 60H					
	1366x768 @ 60Hz					
	1440x900 @ 60Hz 1600x1200 @ 60H					
	1680x1050 @ 60H 1920x1080 @ 60H	z				
Presets / user settings	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 USB		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 2 watt x2	dual microphone for VC	IP, LED indicator			
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 Tilt: 35° back, -	lift: 4.3" (110mm); swivel: +/-45°;				
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, reference				
Presets / user settings On screen display	2560x1440 @ 60Hz Presets: 27; user settings: 25 On screen display with digital user controls (8 languages)		M710 / M900(x) / M70 M600 / M75q / M715 M90n Nano (w	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	All mod	dels	TIO models	All models		
Side ports (Tiny) Rear ports 3-in-1 Cable Camera Internal Speaker Security	combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream, DisplayPort(in), or HDMI(in) port Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional) RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator 2 watt x2 Security keyhole for attachment of optional cable lock (Kensington® lock compatible), locks optional Tiny with TIO together, more security features offered by Tiny installed (optional)							













ThinkCentre M710 Tower Platform Specifications

Processor	Intel® Celeron®, Int	el Pentiu	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5 /	i7 Processor	Manageability	None
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510	Security features	Security slot (in rear for optional Power-on password
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		Kensington® MicroSaver® cable) • Administrator password
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		 Padlock loop Smart USB protection, allows keyboard/ Boot sequence control
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		mouse only, blocks all storage devices • Boot without keyboard and mouse
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Optional cable lock to physically lock Individual USB port disablement
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		both keyboard and mouse • Optional chassis intrusion switch
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mechanical	Tower (15L), black color, metal case
Memory	64GB max, UDIMN dual-channel capal * System automatic	ble				•		 (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S Some: Intel Optan	Drive (Satate Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" VMe, Po	Cle 3.0 x 4, 32Gb/	's		Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 3.5", 1" high, internal, HDD/SSD Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1*
Optical	Some: DVD-ROM Some: DVD Burne	SATA 1.5 er (DVD±	5Gb/s Drive, slim RW), SATA 1.5G	(9.0mm)			Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1* Slot 4: no slot, only bracket for optional port extension*
Onboard SATA Media reader	Three onboard SA Optional 7-in-1 me	dia reade	r					M.2 card slots: Two (one for WLAN, one for SSD/Optane) * Optional 2 front USB3.1 Type-C ports module occupies PCle x16 slot (x4 card),
Graphics	Intel HD Graphics 510/530/610/630 in processor, uses main memory, DirectX® 12 one VGA, two DisplayPort™, supports 3 independent displays, works along with discrete graphics to support more displays; Max resolution: 4096x2304 (DP) @ 60Hz; 2048x1536 (VGA) @ 50Hz Some: NVIDIA Geforce® GT 730, DirectX 12, 2GB, PCIe 2.0 x8 adapter, two DisplayPort, 35 watts;			long with	Power supply Limited warranty	optional rear 2x USB2.0 / parallel occupies one expansion slot Some: 180 watts, autosensing, 85% PSU 210 watts, autosensing, 85% PSU 210 watts, autosensing, 92% PSU (only available via special bid) Some: 1-year or 3-year, depot service / service upgrades available		
	Some: AMD Rade	on™ R7∶		2GB, PC	le 3.0 x8 adapter,		Preload	Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system Preloaded applications (only some
Monitor Cable	Max resolu	tion: 4096	, 75 watts, occup 5x2160 (HDMI)@	24Hz; 20	048x1536 (VGA)@	85Hz	rolodd	Some: Windows® 7 Professional 32/64 listed) preinstalled through downgrade • Microsoft Office preloaded;
	Optional DP to VG		ט-ועכ (single iink	(), DP (0	dual DP, of DP to	DUNI 1.4	_	rights in Windows 10 Pro 64-bit purchase a product key to activate
Chipset Front ports*	Four USB 3.1 Gen	1, optiona	al two USB 3.1 Ty	/pe-C Ge	en 2 (only available	e via special	_	(not available with 7th Gen Intel - Only for Window 10 processor) Some: Windows 10 Pro 64-bit - Only for Window 7
Rear ports*	bid), microphone (3 Two USB 3.1 Gen1 serial (9-pin), optio two PS/2 ports (ke additional VGA, Dis	I, two ÚS nal parall yboard/m	B 2.0, optional tw el (25-pin), ether ouse);	vo USB 2 net (RJ-	45), one VGA, two	DisplayPort,		Some: Windows 10 Home 64-bit • Lenovo Solution Center • Lenovo ThinkVantage Tools • Create Recovery Media • Adobe® Reader®
Rear audio ports* IEEE 1394*	Line-in (3.5mm), lir	ne-out (3.	5mm), micropho	ne-in (3.	5mm)	74010		 Cyberlink PowerDVD Create (DVD±RW)
	* Depending on many	/ factors, a	ctual data transfer s	speed mag	be lower than theo	retical speed	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),
Audio support	High Definition (HD) Audio,	Realtek ALC662	/ optiona	al internal speaker	(1.5 watt)		ErP Lot 3, GREENGUARD®, RoHS-compliant,
WLAN ¹³	Some: 11ac wirele Wi-Fi + Blu	ietooth 4.	1 combo adapter	r, 1x1	,	,,	Accessories	TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com
	Some: 11ac wirele Wi-Fi + Blu Some: 11ac wirele	ıetooth 4.	1 combo adapter	r, 2x2		pand),		
	Wi-Fi + Blu Some: 11ac wirele	ietooth 4. ess, M.2 (1 combo adapte Card, Intel Dual E	r, 1x1 Band Wir	,			
Bluetooth™ Ethernet Modem	Wi-Fi + Blu Some: Bluetooth 4 Gigabit ethernet, F None	4.1 wirele		Wi-Fi + E				
*	stions above may not							Lanava Juna 201













ThinkCentre M715 Tower Platform Specifications

Processor	AMD A6 / A8 / A10 / A1	12 series AF	PU and Ryzen :	3 / 5 / 7 series	s processor	Manageability	DASH
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Ryzen 3 PRO 1200	4/4	3.1 / 3.4	2MB	None	Security features	Security slot (in rear for optional Power-on password
	Ryzen 3 PRO 1300	4/4	3.5 / 3.7	2MB	None		Kensington® MicroSaver® cable) • Administrator password • Hard disk password
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		 Padlock loop Smart USB protection, allows keyboard/ Hard disk password Boot sequence control
	Ryzen 7 PRO 1700	8 / 16	3.0 / 3.7	4MB	None		mouse only, blocks all storage devices • Boot sequence control
	PRO A6-8570	2/2	3.5 / 3.8	1MB	Radeon R5 Series		 Optional cable lock to physically lock Individual USB port disablement
	PRO A10-8770	4/4	3.5 / 3.8	2MB	Radeon R7 Series		both keyboard and mouse • Optional chassis intrusion switch
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	PRO A8-9600	4/4	3.1 / 3.4	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	PRO A10-9700	4/4	3.5 / 3.8	2MB	Radeon R7 Series		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A12-9800	4/4	3.8 / 4.2	2MB	Radeon R7 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Memory	64GB max, UDIMM, DI dual-channel capable * System automatically		·		•	Mechanical r	 Tower (15L), black color, metal case (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	/e (SSD) / S · Drive (SSI	SATA 6.0Gb/s, 2 0) / PCIe NVMe	2.5" e, PCle 3.0 x 4			Bay 1: Slim external ODD bay Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), S	ATA 1.5Gb/s D		mm)		Slot 1: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCIe 2.0 x1*
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader					Slot 3: half-length full-height (length < 189mm, height < 104mm), PCIe 2.0 x1* Slot 4: no slot, only bracket for optional port extension*
Graphics	AMD Radeon™ Graph memory, DirectX® 12, of are invalid on the mode displays, works along w	one VGA, twels with AMI	o DisplayPort™ DRyzen proces	' (Onboard V(ssor), support	GA and DP ports s 3 independent	1	M.2 card slots: two (one for WLAN, one for SSD) * Optional front USB3.1 Type-C x2 module occupies PCIe x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot
	Max resolution: 4096x2 Some: NVIDIA Geforce two DisplayPort	:160 (DP)@ e® GT 730 , , 35 watts;	60Hz; 1920x12 DirectX 12, 2G	200 (VGA)@6 B, PCIe 2.0 x	0Hz	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 210 watts, autosensing, 92% PSU (only available via special bid)
	Max resolution: Some: AMD Radeon™ one VGA, one H	RX 550, D IDMI, one D	irectX 12, 2GB DisplayPort, 50	PCIe 3.0 x8 watts, occupio	es two slots;	Limited warranty Preload	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system
Monitor Cable	Max resolution:	5120x2880	(DP)@60Hz		,	1101044	Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (Only available with Pro A6/A10/A12-8xxx APUs)
	Optional DP to VGA, DI	ר נס טעו-ט	(single link), DF	to dual DP, C	OF DP to HUMI 1.4	_	Some: Windows 10 Pro 64-bit
Chipset	AMD B350 Chipset						Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Front ports*	Two USB 3.1 Gen2, two						Microsoft Office preloaded;
Rear ports*	available via special bid Two USB 3.1 Gen1, two						purchase a product key to activate
rical porto	2nd serial (9-pin), optio	nal parallel	(25-pin), ether	net (RJ-45), o	ne VGA and two		- Only for Window 10
	DisplayPort (not availab	ole on mode	els with AMD R	yzen process	or),		 Lenovo Companion Only for Window 7
	two PS/2 ports (keyboa	rd / mouse)); .h.a.l		and a second also		Lenovo Solution Center
Rear audio porto	additional VGA, Display				some modéls		Lenovo ThinkVantage Tools
Hear audio ports IEEE 1394*	Line-in (3.5mm), line-ou None	ມເ (ວ.ວmm),	mcropnone-in	(J.Smm)			Create Recovery Media
	* Depending on many factor	ors, actual da	ta transfer speed	may be lower t	han theoretical speed		Adobe® Reader® Cyberlink PowerPMD Creete (DMD) PMM
Audio support	High Definition (HD) Au		•			Environment and	Cyberlink PowerDVD Create (DVD±RW) Children (North America)
WLAN	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, F	Realtek RTL882	1AE (dual ba	, ,	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant
	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, C	Qualcomm Athe	ros QCA6174	1A (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
	Some: 11ac wireless, l Wi-Fi + Bluetoo	M.2 Card, C	Qualcomm Athe	ros QCA9377	7 (dual band),		
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 o Gigabit ethernet, Realte None	r 4.1 wirele	ss, integrated in	n Wi-Fi + BT o	combo adapter		
	-						













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th / 9th Gen	Intel Co	ora™ i3 / i5 / i7 / i0	Processor	Μ/Ι ΔΝΙ13	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),
1 10063301		Cores /	Frequency		Memory Support		VVLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	DI t tl. TM	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt)	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8300	4/4 6/6	3.7G 2.8G / 4.0G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Bitland BN8E88*, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)
	Core i5-8400 Core i5-8500	6/6	3.0G / 4.1G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630		* Choose either I350-T4 or BN8E88
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Manageability	None
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Security features	Security slot (in rear for optional Power-on password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) ◆ Administrator password
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
Memory	64GB max, UDIMM,	DDR4-26	66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
•	dual-channel capable							Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	* System automatical	,				y controller	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
Storage	Some: Hard Drive / S	SATA 6.00	3b/s, 2.5" or 3.5"	, 5400 rp	om or 7200 rpm			Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Some: Solid State D Some: M.2 SSD (22)	rive (SSL 42 / 2280) / SAIA 6.0GD/S) / PCIA NVMA F	5, 2.5" PCIA 3 0	v2 or PCIa 3.0 v/	1		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	Some: Intel Optane [™]						Mechanical	• Tower (15L), black color, metal case
Optical	Some: DVD-ROM S	ATA 1.5G	b/̀s Drivė, slim (9	.0mm)		,,	IVIECHALIICAI	• (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm
Only a sud CATA	Some: DVD Burner			Drive, s	slim (9.0mm)			Approx. 15.21 lb (6.9 kg), weight may vary by configuration
Onboard SATA Media reader	Three onboard SATA Optional 7-in-1 media		connectors					Optional dust filter
Graphics	Intel UHD Graphics		n processor use	c main r	nomory DiroctY®	10	-	Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD
Graphics	one VGA (up to 2048							Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)
	supports 3 independe	ent displa	ys, more displays	suppor	t via discrete grap	ohics		Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16
	Some: NVIDIA Gefor	rce® GT 7	30 (End Of Life)	DirectX	12, 2GB, PCle 2	.0 x16,		Slot 2: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x1
	Some: AMD Radeon	DisplayPo	ort (up to 3840x2	160@60)HZ) PCIA 3 0 v8 30 v	atte		Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension
			1096x2160@60F		1 CIE 3.0 X0, 30 W	raiis,		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	Some: AMD Radeon	າ RX 550)	, DirectX 12, 4G	B'GDDF	R5, PCIe 3.0 x8, 5	50 watts,	Power supply	Some: 180 watts, autosensing, 85% PSU
			3840x2160@60H				1 ower suppry	Some: 210 watts, autosensing, 85% PSU
Monitor Cable	Optional DP to VGA	donale D	e VGA (up to 20- P to DVI-D donal	48X 1536 A DP to	'⊌85HZ) dual DP dondle (for Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
oo. Gabio	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	.4 dongle	ioi oollage	Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available
Chipset	Intel B360 Chipset	<u> </u>	. ,,				1	Some: 1-year or 3-year, limited onsite service / service upgrades available
	2x USB 3.1 Gen2, 2x	/ LICE 2.1	Cont 1v LISB 3	1 Typo	C Con1 (15W ob	orging)	Preload	Preloaded operating system
From ports (Stu.	1x microphone (3.5m	nm). 1x he	adphone / micro	nhone c	ombo jack (3.5mr	aigiiig), n)		Some: Windows® 10 Pro 64-bit
Front ports* (Opt.) Optional: 1x media re	eader						Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Rear ports* (Std.)	4x USB 2.0, 1x serial	l (9-pin), 1	x ethernet (RJ-4	5), 1x V(GA, 2x DisplayPo	rt,		Lenovo Vantage
Poor porto* (Opt	1x line-out (3.5mm)	0 4 1 -	DOI: 4** 0 11	00 0 4 7		2014**		Microsoft Office preloaded;
Rear ports (Opt.	Optional: 2x USB 3.1 (special bid only), 1x	Gen1 via	. PCIe X1^^, 2X U I (9-pip) 4y seris	SB 3.1 I	ype-C Gen2 via F	Cle x4^^		purchase a product key to activate
	1x parallel (25-pin), 2	2 PS/2 pc	rts (kevboard/m	u (ə-piii) ouse), ad	dditional RJ-45 ar	nd video		Cyberlink PowerDVD (only for models with DVD / DVD±RW)
	ports available on opt	tional grap	phics or ethernet	card				 Cyberlink Power2GO (only for models with DVD±RW) LinkedIn
	* Depending on many fa					tical speed	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
A., ali a	** Choose either 2x USE		**			ш \	LIMIOIMIEM	TUV low noise verified (coming soon, on some models), RoHS-compliant
Audio support	High Definition (HD)	Audio, Re	aitek ALC233VB	2 / Interr	nai speaker (2 wa	tt)	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
							7 10003301103	1 of companion accessories, please go to map in a maneriovo.com













ThinkCentre M910 Tower Platform Specifications

			® 0/711 O				le	0: 1: 1
Processor	Intel® Celeron®, Int			eration In	i i		Ethernet Modem	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN None
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Manageability	Intel Active Management Technology 11.0 (Intel AMT 11.0);
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	Security chip	adapter to enable vPro function through wireless connection) TPM (Trusted Platform Module) 2.0, TCG Certified
	Core i3-7300	2/4	4.0G /	4 MB	DDR4-2400	HD 630		* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Security features	Security slot (in rear for optional Power-on password
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		 Padlock loop Smart USB protection, allows keyboard/ Hard disk password Boot sequence control
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		mouse only, blocks all storage devices • Boot sequence control • Boot sequence control
Memory	64GB max, UDIMN dual-channel capal	hĺa	, , , , , , , , , , , , , , , , , , ,		,	*		 Optional cáble lock to physically lock both keyboard and mouse Individual USB port disablement Optional chassis intrusion switch
Otawa	* System automation	Cally Clock	OCh/a O FII ar O	TIL FACO	S WILLI IOWEL THEIL	ory controller	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
Storage	Some: Hard Drive Some: Solid State	Drive (S	SD) / SATA 6.0G	.5", 5400 h/s. 2.5"	rpm or 7200 rpm			Some: Lenovo Traditional Keyboard (USB connector), black
	Some: M.2 Solid S	State Drive	e (ŚSD) / PCIe N	IVMe, PO	Cle 3.0 x 4, 32Gb	/s	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black
	Some: Intel Optan	ne™ Memo	ory (models with	7th gen	Core processor),	M.2		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Optical	Some: Front accessome: DVD-ROM	SSIDIE AND	5Gb/s 5 25" or), 3.5", 10 slim (9 Ni	ckable via priysic: mm)	агкеу	Mechanical	Tower (18L), black color, metal case
Optioai	Some: DVD Burne	er (DVD±F	RW), SATA 1.5GI	b/s, 5.25'	or slim (9.0mm)			• (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm
Onboard SATA	Four onboard SATA	4 6.0Gb/s	connectors (1x	eSATA ar		D 0/1 support		 Approx. 15.45 lb (7 kg), weight may vary by configuration Toolless cover, disk, optical, graphic card removal
Media reader	(RAID preset only a Optional 7-in-1 me			odel)				Optional carry handle, dust filter
Graphics	Intel HD Graphics			ecor He	es main memory	DirectY® 12		Bay 1: Slim external ODD bay
Graphics	one VGA, two Disp	olayPort™.	supports 3 inde	pendent	displavs, works a	long with		Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD
	discrete graphics to	o support	more displays;			Ü		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)
	Max resolution: 409 Some: NVIDIA Ge					or		Bay 5: 2.5", internal, HDD/SSD (optional bay)
	two Display			L, 20D, I	Ole 2.0 X0 adapt	GI,		Notes: M910 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)
	Max resolu	tion: 3840	x2160 (DisplayP	ort)@60	Hz;			Slot 1: full-length full-height (length < 268mm, height < 112mm), PCIe 3.0 x16*
	Some: AMD Rade		3 50 , DirectX 11, 2 75 watts, occup					Slot 2: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x1*
					1015, 148x1536 (VGA)@	985Hz		Slot 3: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x16 (x4 signal)*
	Some: NVIDIA Ge	force GT	X™ 1080 (onlý a	vailable v	ia special bid mo			Slot 4: no slot, only bracket for optional port extension*
			le 3.0 x16 adapt 0 watts, occupie		VI-D, one HDMI,			M.2 card slots: Two (one for WLAN, one for SSD/Optane)
					096x2160 (HDMI)	@60Hz		* Optional 2 front USB3.1 Type-C ports module occupies PCle x16 (x4 signal) slo optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot
Manitan Calala		7680	x4320 (with Sing	gle DP)@	60Hz		Danis	· · · · · · · · · · · · · · · · · · ·
Monitor Cable	Optional DP to VG		DVI-D (single link	(), DP to	dual DP, or DP to	HDMI 1.4	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 250 watts, autosensing, 85% PSU
Chipset					0/ 1 111			Some: 400 watts, autosensing, 92% PSU (only available via special bid)
Front ports* Rear ports*	Four USB 3.1 Gen bid), microphone (3 Four USB 3.1 Gen	3.5mm), h	eadphone (3.5m	im)	` ,	·	Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
ricai porto	optional parallel (2)	5-pin), eth	nernet (RJ-45). o	ne VGA.	two DisplayPort.	optional two	Preload	Preloaded operating system
	PS/2 ports (keyboa	ard/mouse	e);			•		Some: Windows® 7 Professional 32/64 listed)
Rear audio porto	additional VGA, Dis	spiayPort,	טעו-ט, or HDMI	on optio	nai graphics on s	ome models		preinstalled through downgrade • Microsoft Office preloaded;
IEEE 1394*	Line-in (3.5mm), lir None	ne-out (3.	omm), microphoi	ne-in (3.5	инт)			rights in Windows 10 Pro 64-bit purchase a product key to activate (not available with 7th Gen Intel - Only for Window 10
	* Depending on many	/ factors, ac	ctual data transfer s	speed may	be lower than theo	retical speed		processor) • Lenovo Companion
Audio support	High Definition (HD	D) Audio, F	Realtek ALC662	/ optiona	l internal speaker	(1.5 watt)		Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit - Only for Window 7 • Lenovo Solution Center
WLAN	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 Cuetooth 4.	Card, Qualcomm 1 combo adapter	Atheros	QCA9377A (dual	band),		Lenovo Think Vantage Tools Create Recovery Media
	Some: 11ac wirele	ess, M.2 C	Card, Qualcomm	Atheros	QCA6174A (dual	band),		 Adobe® Reader®
	Wi-Fi + Blu Some: 11ac wirele		1 combo adapter		Nocc-∆C 2165			Cyberlink PowerDVD Create (DVD - DW)
			ard, inter Duar E 1 combo adapter		51535-AC 3103,		Cardina accessor	(DVD±RW)
	Some: 11ac wirele	ess, M.2 C	Card, Intel Dual E	and Wire	eless-AC 8265,		Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,
			1 combo adapter		Noce AC 9965			TUV low noise verified (on some models)
	Some: 11ac wirele Wi-Fi + Blu	ະວຣ, เงเ.∠ ເ uetooth 4∵	zaru, iritei Dual E 1 combo adaptei	and wife . Intel vP	eiess-AC 8265, ro technology su	oport. 2x2	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
Bluetooth™	Some: Bluetooth							





















ThinkCentre M920 Tower Platform Specifications

Пиологом	Intel® Coloron® Intel	Dantium®	or Oth /Oth Con	Intal Car	10TM :0 / :E / :7 / :0	Drasassar		LICER 1 Time C. Con 0 / Display Port) via PCIa v4 (available on 00/00/0010)
Processor	Intel® Celeron®, Intel			intel Col				USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	_	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2 Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Intel vPro technology support, 2x2
	Pentium Gold G5600 Pentium Gold G5420	2/4	3.9G 3.8G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630 UHD 610	Bluetooth™	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Linemet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	, manageasy	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Caarreiter alain	adapter to enable vPro function through wireless connection)
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	Security slot (in rear for optional Power-on password Administrator password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		 Kensington® MicroSaver® cable) Padlock loop Administrator password Hard disk password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control
	Core i3-9320 Core i5-9400	6/6	3.7G / 4.4G 2.9G / 4.1G	8 MB 9 MB	DDR4-2400 DDR4-2666	UHD 630 UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i5-9400 Core i5-9500	6/6	2.9G / 4.1G 3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Traditional Keyboard (USB connector), black
Momory	64GB max, DDR4-26							Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
Memory	* System automatical						r Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid) Some: Lenovo Calliope Mouse (USB connector), black
Storage	Some: Hard Drive / S	,				.,		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Ciorago	Some: Solid State D	rive (SSD) / SATA 6.0Gb/s	s, 2.5"	or 7200 ipin			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Some: M.2 SSD (22-	42 / 2280) / PCIe NVMe, F	Cle 3.0	x2 or PCle 3.0 x	4		Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
Optical	Some: Intel Optane [™] Optional DVD-ROM of						Mechanical	Tower (18L), black color, metal case (MAD-II)
Onboard SATA	Four onboard SATA 6							 (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm Approx. 15.45 lb (7 kg), weight may vary by configuration
	available via special b	bid model		• • • • • • • • • • • • • • • • • • • •	` '	,		Toolless cover, disk, optical, extension card removal
Media reader	Optional 7-in-1 media							Optional carry handle, dust filter
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main n	nemory, DirectX®	12,		Bay 1: Slim external ODD bay Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD
	one VGA (up to 2048 supports 3 independe							Bay 3: 3.5", 1" high, internal, HDD/SSD
	Some: NVIDIA Gefor	rce® GT 7	30 (End Of Life)	, DirectX	12, 2GB GDDR	5,		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)
	PCIe 2.0 x16,	35 watts,	two DisplayPort	(up to 3	340x2160@60Hz	z)		Bay 5: 2.5", internal, HDD/SSD (optional bay)
	Some: AMD Radeon		irectX 12, 2GB 0 4096x2160@60F		Cie 3.0 x8, 30 v	vatts,		Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)
	Some: AMD Radeon				85, PCIe 3.0 x8, 5	50 watts,		Slot 1: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16
	one DisplayPo	ort (up to	3840x2160@60I	Hz), one	HDMI (up to	,		Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1
			e VGA (up to 20			DDDE		Slot 3: full-length (< 268mm) full-height (< 112mm), PCIe 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension
	Some: NVIDIA Gefor	120 watts	s 1x DVI-D (up t	o 2560x1	600@60Hz) 1x	HDMI (up		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	to 4096x2160	@60Hz),	3x DP (up to 512	20x3200	@60Hz), occupie	es two slots	Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor Cable	Optional DP to VGA (aongle, טו	ם-ivu dong	e, DP to	dual DP dongle	(for Collage	l ower supply	Some: 250 watts, autosensing, 85% PSU
	Display with intel inte	grated gra	apnics), or DP to	HDMI 1.	4 dongle			Some: 400 watts, autosensing, 92% PSU (only available via special bid)
Chipset	Intel Q370 Chipset						Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available
Front ports* (Std.) 2x USB 3.1 Gen2, 2x							Some: 1-year or 3-year, limited onsite service / service upgrades available
Front porte* (Ont	1x microphone (3.5m) Optional: 1x media re	ım), 1x he	adphone / micro	phone co	ombo jack (3.5mi	m)	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit
Rear ports* (Std.) <i>Optional:</i> 1x media re) 4x USB 3.1 Gen1, 1x	eauer (serial (9-	pin). 1x ethernet	(RJ-45)	. 1x VGA. 2x Dist	plavPort.		
	1x line-out (3.5mm)						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
Rear ports* (Opt.	Optional: 2x USB 2.0	, 2x USB	3.1 Gen1 via PC	le x1, 2x	USB 3.1 Type-C	Gen2 via		TUV low noise verified (coming soon, on some models), RoHS-compliant
	PCle x4 (special bid of 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	ousej, D	Thurideiboil 3 (COITIDO		

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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.

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

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

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

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

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

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U.S. EMEA

Summary of Changes

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

December 31, 2019 - Version 553

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

December 11, 2019 - Version 552

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

August 7, 2019 - Version 546

► Update processor information on Thinktation P330 Tiny

July 17, 2019 - Version 545

▶ Update EPEAT rating to Silver on most ThinkStation

June 26, 2019 - Version 544

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

May 15, 2019 - Version 542

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

March 13, 2019 - Version 539

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

February 20, 2019 - Version 538

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

August 22, 2018 - Version 529

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

August 1, 2018 - Version 528

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

June 20, 2018 - Version 526

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

May 30, 2018 - Version 525

► Added ThinkStation P720/P920 EMEA May 2018 models

April 18, 2018 - Version 523

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

March 28, 2018 - Version 522

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

March 7, 2018 - Version 521

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

January 30, 2018 - Version 519

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

December 20, 2017 - Version 517

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

September 29, 2017 - Version 513

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

September 12, 2017 - Version 512

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

August 23, 2017 - Version 511

▶ New ThinkStation P320 Tiny models announced on August 2017

August 2, 2017 - Version 510

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

June 21, 2017 - Version 508

► New ThinkStation P320 Tiny announced on June 2017

May 26, 2017 - Version 507

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

April 19, 2017 - Version 505

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

March 29, 2017 - Version 504

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

January 25, 2017 - Version 501

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

January 4, 2017 - Version 500

► Added ThinkStation P310 models announced on December 2016

December 14. 2016 - Version 499

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

November 23, 2016 - Version 498

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

October 12, 2016 - Version 496

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

August 3, 2016 - Version 493

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

July 13, 2016 - Version 492

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

June 22, 2016 - Version 491

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

June 2, 2016 - Version 490

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

May 19, 2016 - Version 489

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

April 27, 2016 - Version 488

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

April 6, 2016 - Version 487

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

March 23, 2016 - Version 486

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

February 24, 2016 - Version 485

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

December 9. 2015 - Version 482

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

November 18, 2015 - Version 481

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









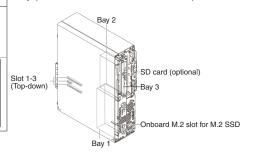


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

Components	Specification				-			
Form factor	8.4L mini-tower							
Dimensions	Height: 343.5 mm (12 5 in\ \//id	th. 02	5 mm	/2 6 in	Donth:	205 6 mm	(12 in)
					1 (3.0 111	, Бериі.	303.0 111111	(12111)
Weight	Maximum configura							
	Supports one of the							
	Xeon E-2278G						(260W PS	U needed)
	Xeon E-2276G	6C/12T/3.8					i	
	Xeon E-2274G	4C/8T/4.00						
	Xeon E-2246G	6C/12T/3.6)	
	Xeon E-2244G Xeon E-2236	4C/8T/3.80 6C/12T/3.4						
	Xeon E-2234	4C/8T/3.60					,	
	Xeon E-2226G	6C/6T/3.40						
	Xeon E-2224G	4C/4T/3.50			-			
	Xeon E-2224	4C/4T/3.40						
Processor	Xeon E-2174G	4C/8T/3.8C						
1 10063301	Core i9-9900	8C/16T/3.1	GHz/	16MB/	65W/DE	R4-2666	5	
	Core i7-9700	8C/8T/3.00	3Hz/12	2MB/6	5W/DDF	R4-2666		
	Core i7-8700	6C/12T/3.2	GHz/	12MB/	65W/DE	R4-2666	3	
	Core i5-9600	6C/6T/3.10						
	Core i5-9500	6C/6T/3.00						
	Core i5-9400	6C/6T/2.90						
	Core i5-8500	6C/6T/3.00						
	Core i3-9300	4C/4T/3.70						
	Core i3-9100 Core i3-8300	4C/4T/3.60 4C/4T/3.70						
	Core i3-8100	4C/4T/3.7C						
	Pentium Gold G5620							
Chipset	Intel C246 Chipset	20/+1/+.00	AI 12/ TI	VID/OT	VV/DDIT	7 2 700	-	
Memory Sockets	4 DIMM sockets with	2 channels						
,	8GB/16GB DDR4-26		CC or					
Memory Types	4GB/8GB/16GB/32G				n-ECC			
Memory Capacity	64GB with 4 x 16GB	for UDIMM E	CC or	128G	B with 4	x 32GB	UDIMM noi	n-ECC
Memory Protection	ECC on models with	UDIMM ECC	mem	eory				
,	Three PCIe 3.0 slot	s as followin	g:					
	Slot 1 PCIe 3.0 x16			to CP	11			
Expansion slots	Slot 2 PCle 3.0 x1,							
						orofilo li	also to DCI	
	Slot 3 PCIe 3.0 x16	<u> </u>			<i>,</i>			
	Integrated Intel UHI	D Graphics F	'630 II	n -G s	suffix Xe	on proce	essors, or I	ntel UHD
Processor graphics	Graphics 630 in Co Works along with di	ie is oi is più	ice to	OIS.	ort mult	i-dienlay	anables th	roo roor
	display connectors	(2 DP standa	ard. 1	DP or	HDMI	ontional)	CHADICS II	ilee leal
	Up to two PCIe 3.0							3) Supports
	the following graphi	cs adapters:	uiscit	cic gi	aprilos c	ισαρισι (Olot I alla	o). Oupports
Discrete graphics	3 0 1	ores Memo	rv I	Power	Con	nectors	Max qty	
card		56 2GB GDI		30W		niniDP	2	
		12 2GB GDI		40W		niniDP	2	
		40 4GB GDI		47W		niniDP	2	
	Storage Controller			Inter	rface	Disl	к Туре	RAID
Storage Controller	Onboard Intel RST S	SATA RAID	Std	SATA	6Gb/s	HDD	or SSD	0/1
Storage Controller	Onboard Intel RST F				NVMe		Cle SSD	0/1
	Notes: M.2 SSD support is	s limited, please	see Sto	rage ba	y section	for more inf	ormation	
		nterface RPI	_		Offerina			v Otv
		TA 6Gb/s 7.2			3/2TB/41	TB.	ivia	x Qty 1
		TA 6Gb/s 7.2			OGB FIP			2
Storage Support		TA 6Gb/s			3/512GE			2
		le NVMe			32GB		1, used wi	th HDD/SSD
		le NVMe	1	256GE	3/512GE	/1TB		3

	Components	Specification
_		Up to 3 bays with two disk bays and one slim optical bay:
		Bay 1 Primary 3.5" SATA bay
	Storage bay	Bay 2 2.5" SATA bay (Optional)
		Bay 3 9mm Slim ODD bay
		M.2 3x M.2 SSD (1 onboard. 2 via PCle to M.2 adapter) Notes: Support 1x M.2 SSD at present, 3x M.2 SSD support is pending availability
	M.2 slot for Wi-Fi and Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps
	Media reader	Optional SD card reader on most models
	Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional PCIe ethernet adapters are available
	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, E-lock, cable lock, Kensington lock, and pad lock
	Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed
	Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models
	Base warranty	US models comes with 3-year limited onsite service with 9x5/NBD. 1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs
	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec
	Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x Combo jack
	Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor
		Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0
	Optional rear ports	Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.1 Gen 1. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor
	Temperature	Operating: 50 °F to 95 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)
٦	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
4	Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified
	Power supply	Supports one 210W or 260W power supply. 210W is 100V - 240V, 85% PSU, Climate Savers Computing Bronze and 80 PLUS Bronze qualified. 260W is 100V - 240V, 92% PSU, Climate Savers Computing Platinum and 80 PLUS Platinum qualified
	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/
	Note:	ors, actual data transfer speed mentioned on this page may be lower than theoretical speed.

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								
Form factor	1L. Optional VE Optional floor s Optional tool-le Optional dust fi	tand fo	or vertica	I orientation		ESA	75mm and 1	00mm.	
Dimensions	Height: 179 mn		n). Width	: 37 mm (1.	5 in). D	epth	: 183 mm (7.	2 in)	1
Weight	Maximum confi	guratio	n: 2.9 lb	(1.3kg)	,		,	· · · · · · · · · · · · · · · · · · ·	7
Recommended monitors	Lenovo recommend productivity		ThinkVis	ion P series	s monit	ors fo	or best displa	y performance	
	Supports one of	of the fo	ollowing:						
	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	Intel UHD Graphics 630	
	Core i7-9700	8	8	3.0GHz	12MB	65W	DDR4-2666	Intel UHD Graphics 630	
	Core i5-9600T	6	6	2.3GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	1
	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	ı
	Core i5-9500	6	6	3.0GHz	9MB	65W	DDR4-2666	Intel UHD 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	Intel UHD Graphics 630	ı
	Core i3-9320	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD Graphics 630	í
	Core i3-9300T	4	4	3.2GHz	8MB	35W	DDR4-2400	Intel UHD Graphics 630	
Broomer	Core i3-9300	4	4	3.7GHz	8MB	62W	DDR4-2400	Intel UHD 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	Intel UHD 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	Intel UHD 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	
	Core i5-8500T	6	6	2.1GHz	9MB	35W	DDR4-2666	Intel UHD Graphics 630	r E
	Core i5-8500	6	6	3.0GHz	9MB	65W	DDR4-2666	Intel UHD Graphics 630	H
	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	
	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							-	\parallel
Memory	2 DIMM socket		34-2666.	SoDIMM. N	lon-EC	С			_ _
Memory Capacity	64GB (2x 32GE	3)							

	Components	Specification				
		One PCIe slot via	a spec	rific riser card:	2\ d	laur anafila fan dia anata anandaian
	Expansion slots	card;			,	low profile for discrete graphics pter and quad COM ports adapter
	Graphics	65W or 62W pro	cessor	r models suppo	orts pr	ocessor graphics only.
\dashv		adapter		<u> </u>		
	Graphics - Processor graphics	support multi-dis	play	<u> </u>		along with discrete graphics to
ıl		One of the follow	ing dis	screte graphics	card	s on 35W processor models:
	Graphics - Discrete graphics card		Cores	í	Pow- er	Connectors
	9	Quadro P620 Quadro P1000		2GB GDDR5 4GB GDDR5		4x miniDP 4x miniDP
	Storage controllers	Integrated Intel S SATA port for 2.5			in chi	pset, 6Gbps SATA, one onboard
11	Internal storage bay	Up to one 2.5" H	DD on	models witho	ut disc	crete graphics card
$\ \ $	Disks					, 5.4K; or 1TB SATA 6Gbps, 7.2K
	M.2 slot for SSD	or 2242 SSD				r M.2 2280 SSD, one for M.2 2280
	M.2 SSD	M.2 2280 SSD s M.2 2242 SSD s	upport	ts up to 512GE	each	•
	Optane memory	a 2.5" HDD				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 0 1.73 0 8265	, 2x2, 2.4GHz Gbps. , 2x2, 2.4GHz	/5GHz /5GHz	fi-Fi card, supports one of the (160MHz channels), 802.11ac, (1802.11ac, Bluetooth 4.2, up to not be supported in some countries
H	Wi-Fi antenna	Optional Tiny 2.4				
	Optical	Optional one 9.0 VESA mount is r			optica	Il drive kit, DVD-ROM or DVD±RW.
H	Media reader	None. Using USE	3 adap	oter		
	Network interfaces	One onboard Gb Wake-on-LAN. O	E port	t via integrated Il Intel i350-T4	gigab for 4x	oit ethernet Intel i219LM, supports GbE ports, using PCIe slot
	Security features	Power-on and ac Chassis intrusion				tform Module, TCG 2.0 compliant. on lock
	Intel vPro Technology	Supports vPro or i7-8700, Core i5- vPro also require	8600T	, Core i5-8600), Core	processors: Core i7-8700T, Core i5-8500T, Core i5-8500. Fi is needed
	Systems management	Intel Active Mana Intel Standard M	ageme anage	ent Technology ability on othe	12 on r mode	vPro models, els
	Base warranty					e service with 9x5/NBD. NBD in EMEA or other GEOs
$\ $	HD Audio	Intel HD Audio in	terface	e with Realtek	ALC2	33 Codec
-	Front standard ports	1x USB 3.1 Gen Combo jack	1 Туре	e A (charging).	1x US	SB 3.1 Gen 1 Type-C. 1x Mic-in. 1x
	Rear standard ports	1x HDMI				1 Type-A. 1x RJ-45. 1x DP.
	Optional rear ports - via punch out cable	Up to two options Port 1 supports of 1x USB 3.1 Gen 1x COM. 1x VGA. 1x DP. 1x HDMI.	ne of 1 Type	the following: e-C, also supp		
\dashv		Port 2 supports of	ne CC)M		
\dashv						

ThinkStation P330 Tiny Platform Specifications - II of II

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













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

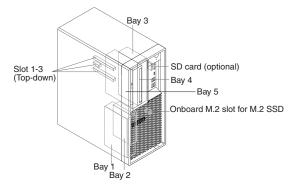
Note: 2x Quadro P2000, Quadro P4000, Quadro P5000, or Quadro RTX 4000 needs 400W PSU

Components	Specification			Components	Specification					
Form factor	18L Tower				Storage Contro	oller	Type	Interface	Disk Type	RAID
Dimensions	Height: 376 mm (14	.8 in). Width: 165 mm (6.5 in). Depth: 32	8 mm (12.9 in)	Storage Controller		RST SATA RAID			HDD or SSD	0/1/10/5
Weight	Maximum configura	tion: 28.22 lb (12.8kg)	,	1	Onboard Intel	RST PCIe RAID	Std	PCIe NVMe	M.2 PCle SSD	0/1
g		e following processors:			Disk Type	Interface F	RPM	Offering	Max	Qty
	Xeon E-2286G	6C/12T/4.0GHz/12MB/95W/DDR4-2666	400W PSII poodod			O SATA 6Gb/s 7		1TB/2TB/4T		
	Xeon E-2278G	8C/16T/3.4GHz/16MB/80W/DDR4-2666		Ctown and Commont		D SATA 6Gb/s 7	'.2K	500GB FIP		
	Xeon E-2276G	6C/12T/3.8GHz/12MB/80W/DDR4-2666		Storage Support	2.5" SAIA SSL	SATA 6Gb/s	-	256GB/512GB		
	Xeon E-2274G	4C/8T/4.0GHz/8MB/83W/DDR4-2666			Optane Memo	ry PCIe NVMe		32GB	1, used with F	
	Xeon E-2246G	6C/12T/3.6GHz/12MB/80W/DDR4-2666			M.2 PCIe SSD	PCIe NVMe		256GB/512GB		
	Xeon E-2244G	4C/8T/3.8GHz/8MB/71W/DDR4-2666			Un to five have	s with four disk l	าลพรา	olus one slim o	ptical bay, support	s up to 3x
	Xeon E-2236 Xeon E-2234	6C/12T/3.4GHz/12MB/80W/DDR4-2666 4C/8T/3.6GHz/8MB/71W/DDR4-2666			3.5" HDD plus	s 1x 2.5" SSD, o	r 4x 2	.5" HDD/SSD	plical bay, support	o up to ox
	Xeon E-2236G	6C/6T/3.4GHz/12MB/80W/DDR4-2666				v disk bav, 3.5" (
	Xeon E-2224G	4C/4T/3.5GHz/8MB/71W/DDR4-2666				, ,,			nd Quadro P2000	ie usad
	Xeon E-2224	4C/4T/3.4GHz/8MB/71W/DDR4-2666				dary disk bay, 3.			na Quadro i 2000	is useu
	Xeon E-2186G	6C/12T/3.8GHz/12MB/95W/DDR4-2666	400W PSU needed			lex bay, support			o.	
Processor	Xeon E-2174G	4C/8T/3.8GHz/8MB/71W/DDR4-2666		Storage Bays					nderbolt/IEEE1394	1
	Core i9-9900K	8C/16T/3.6GHz/16MB/95W/DDR4-2666								
	Core i9-9900 Core i7-9700K	8C/16T/3.1GHz/16MB/65W/DDR4-2666 8C/8T/3.6GHz/12MB/95W/DDR4-2666			Fnclo	isk bay, 3.5 or 2 sure, using SAT	2.5 , 1 A 4 c	emovable, via onnector as es	Front Access Store	age
	Core i7-9700K	8C/8T/3.0GHz/12MB/95W/DDR4-2000	400W F30 Needed			isk bay, 3.5" or 2				
	Core i7-8700	6C/12T/3.2GHz/12MB/65W/DDR4-2666			Bay 5 9mm S		o , v	14 5.25 10 0.5	TIDD KIL	
	Core i5-9600K	6C/6T/3.7GHz/9MB/95W/DDR4-2666	400W PSU needed			SSD (1 onboard.	2 via	PCIe to M 2 ad	antar)	
	Core i5-9600	6C/6T/3.1GHz/9MB/65W/DDR4-2666		Media reader		ard reader on m			apterj	
	Core i5-9500	6C/6T/3.0GHz/9MB/65W/DDR4-2666		Network					rnet Intel i219LM,	cupporte
	Core i5-9400	6C/6T/2.9GHz/9MB/65W/DDR4-2666		interfaces	Wake-on-LAN	l. Optional PCIe	ether	net adanters a	re available	supports
	Core i5-8500 Core i3-9300	6C/6T/3.0GHz/9MB/65W/DDR4-2666 4C/4T/3.7GHz/8MB/62W/DDR4-2400			One dedicate				Wireless-AC 9560	2x2
	Core i3-9100	4C/4T/3.6GHz/6MB/65W/DDR4-2400		WLAN + Bluetooth					etooth 5, up to 1.7	
	Core i3-8300	4C/4T/3.7GHz/8MB/62W/DDR4-2400			Power-on and	admin passwor	d. Tru	sted Platform I	Module, TCG 2.0 c	ompliant.
	Core i3-8100	4C/4T/3.6GHz/6MB/65W/DDR4-2400		Security features		sis intrusion swi	tch, E	-lock, cable lo	ck, Kensington lock	k, and pad
Chipset	Intel C246 Chipset				lock	D V				
Memory Sockets	4 DIMM sockets with	2 channels		Intel vPro		vPro on Xeon r uires Wireless-A			eded.	
Memory Types	8GB/16GB DDR4-26	666 UDIMM ECC or B DDR4-2666 UDIMM non-ECC		Intel AMT		anagement Tech				
Memory Capacity		for UDIMM ECC or 128GB with 4 x 32GB t	JDIMM non-ECC	Inter Aivi i		Manageability				
Memory Protection		UDIMM ECC memeory		Base warranty	US models co	mes with 3-year	limite	ed onsite servi ith 9v5/NRD in	ce with 9x5/NBD. EMEA or other GE	-Os
-	Three PCIe 3.0 slot	s as following:		HD Audio		inted offsite serv				_03
Evanasian alata		, full height, half length, links to CPU							e A. 1x USB 3.1 Ge	en 1
Expansion slots	Slot 2 PCle 3.0 x1,	full height, full length, links to PCH		Front ports	Type-C. 1x Mid	c-in. 1x Combo j	ack	,,		
	Slot 3 PCle 3.0 x16	(negotiable link width x4), full height, ha	If length, links to PCH	Door norto			USB	2.0 Type-A. 1x	RJ-45. 1x COM. 2:	x DP.
	Integrated Intel UHI	D Graphics P630 in -G suffix Xeon proce	ssors, or Intel UHD	Rear ports	1x Audio line-	Out Core, Pentium, or -G s	suffix X	eon nrocessor		
Processor graphics		re i7, i5, i3, or Pentium processors.	•	Optional front						
1 Toccssor grapinos	Works along with di	screte graphics to support multi-display,	enables three rear	ports (on flex	1x eSATA. 1x		one	ot two ports su	pports video-out.	
		(2 DP standard, 1 DP or HDMI optional)	4 10\ 0 1 11	module)						
	following graphics a	x16 slots for discrete graphics card (Slot	1 and 3). Supports the		Supports the f	following via cab	le:	D and still DML	0 LICD 0.0	
		<u>'</u>	14 01	Optional rear		arallel. Žx PS/2. following via PC			2X USB 2.0	
	Graphics Quadro P400	Memory Power Connector 2GB GDDR5 30W 3x miniDP	Max Qty 2	ports	4x COM. 2x U	SB 3.1 Type-C. If needs Core, Pentiur	2x US	B 3.1 Gen 1. 1	x Thunderbolt.	
		2GB GDDR5 40W 4x miniDP	2						ssor	
Discrete Graphics		4GB GDDR5 50W 4x miniDP	2		Operating: 50	°F to 95 °F (10	°C to	35 °C)	° O + - 00 ° O)	
Offering	Quadro P2000	5GB GDDR5 75W 4x DP	2	Temperature	Non operating	(no package): 1 (with package):	14	to 140 °F (-10	40 °C to 60 °C\	
	Quadro P2200	5GB GDDR5X 75W 4x DP	2		raon operating	(with package)	40	1 10 140 1 (-4	+0 0 10 00 0)	
		8GB GDDR5 105W 4x DP	1							
		6GB GDDR5X 180W DVI-D DL + 4x DP	1 1							
I	Quadro HTX 4000	8GB GDDR6 160W 3x DP, 1x VirtualLink								

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

Form factor			/10 1" D >					
Dimensions	165mm/6.5" W x	460mm	/IO.I D)	x 440mm/	17.3"	H (with fee	t)	
Weight	Maximum configu					`	<i></i>	
		# of	# of	Base		Ozaba	TDD	Memory
	Processor	Cores	Threads	Frequer	ncy	Cache	TDP	Types
	Xeon W-2295	18	36	3.0GH	lz	24.75MB	165W	DDR4-2933
	Xeon W-2275	14	28	3.3GH	lz	19.25MB	165W	DDR4-2933
	Xeon W-2265	12	24	3.5GH	lz	19.25MB	165W	DDR4-2933
	Xeon W-2255	10	20	3.7GH	lz	19.25MB	165W	DDR4-2933
	Xeon W-2245	8	16	3.9GH	lz	16.5MB	155W	DDR4-2933
	Xeon W-2235	6	12	3.8GH	lz	8.25MB	130W	DDR4-2933
	Xeon W-2225	4	8	4.1GH		8.25MB	105W	DDR4-2933
D	Xeon W-2223	4	8	3.6GH	lz	8.25MB	120W	DDR4-2666
Processor Support	Xeon W-2195	18	36	2.3GH		24.75MB	140W	DDR4-2666
	Xeon W-2175	14	28	2.5GH		19MB	140W	DDR4-2666
	Xeon W-2155	10	20	3.3GH		13.75MB	140W	DDR4-2666
	Xeon W-2145	8	16	3.7GH		11MB	140W	DDR4-2666
	Xeon W-2135	6	12	3.7GH		8.25MB	140W	DDR4-2666
	Xeon W-2133	6	12	3.6GH		8.25MB	140W	DDR4-2666
	Xeon W-2125	4	8	4.0GH		8.25MB	120W	DDR4-2666
	Xeon W-2123	4	8	3.6GH		8.25MB	120W	DDR4-2666
	Xeon W-2104	4	4	3.2GH		8.25MB	120W	DDR4-2400
	Xeon W-2104	4	4	2.9GH		8.25MB	120W	DDR4-2400
Processor Sockets		-	4	2.3011	IZ.	0.231010	12000	DD114-2400
		- 1						
Chipset	Intel C422 Chips							
Memory Sockets	8 DIMM sockets							
Memory Types	DDR4-2666 RDII	MM or D	DR4-293	3 RDIMM	1			
Managarity Camagaity	512GB with 8 x 6	34GB DI	DR4-2933	RDIMMs	3			
Memory Capacity								
Memory Capacity Memory Protection	ECC		v0 full b	aiaht full	lonath	2 OEW 222	لم مام م	
	ECC Slot 1 (CPU) F	PCIe 3.0				n, 25W, ope		
	Slot 1 (CPU) F Slot 2 (CPU) F	PCIe 3.0 PCIe 3.0	x16, full	height, ful	ll leng	th, 75W, do	uble-wid	th
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F	PCIe 3.0 PCIe 3.0	x16, full	height, ful	ll leng		uble-wid	th
	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F	PCIe 3.0 PCIe 3.0 PCIe 3.0	x16, full l x4, full h	height, ful eight, half	II leng f lengt	th, 75W, do th, 25W, op	uble-wid en endec	th I
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F	PCle 3.0 PCle 3.0 PCle 3.0 PCle 3.0	x16, full l x4, full h x16, full	height, ful eight, half height, ful	II leng f lengt II leng	th, 75W, do	uble-wid en endec	th I
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full	x16, full l x4, full h x16, full l height, ful	height, ful eight, half height, ful Il length, 2	II leng f lengt II leng 25W	th, 75W, do th, 25W, op th, 75W, do	uble-wid en endec uble-wid	th I th
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full	x16, full have x4, full have x16, full height, full x4, full have	height, ful eight, half height, ful Il length, 2 eight, half	II leng f lengt II leng 25W f lengt	th, 75W, do th, 25W, op th, 75W, do th, 25W, op	uble-wid en endec uble-wid en endec	th I th
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full	x16, full l x4, full h x16, full l height, ful	height, ful eight, half height, ful Il length, 2 eight, half Pow-	II leng f lengt II leng 25W f lengt	th, 75W, do th, 25W, op th, 75W, do	en endec ouble-wid en endec SLI/N	th I th I IV- Max Qty
Memory Protection	Slot 1 (CPU) F	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0	x16, full hexa, full h	height, ful eight, half height, ful Il length, 2 eight, half Pow- er	II leng f lengt II leng 25W f lengt	th, 75W, do th, 25W, op th, 75W, do th, 25W, op onnector	uble-wid en endec uble-wid en endec	th I th I NV- Max Qty
Memory Protection	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0	x16, full height, full height, full k4, full hemory	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W	II leng f lengt II leng 25W f lengt Co	th, 75W, do th, 25W, op th, 75W, do th, 25W, op onnector mini DP	en endec ouble-wid en endec SLI/N	th I th I I I I I I I I I I I I I I I I
Memory Protection	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 AG	x16, full he x4, full he x16, full height, full x4, full hemory B DDR3 B GDDR5	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W	II leng f lengt II leng 25W f lengt Co 8x 3x	th, 75W, do th, 25W, op th, 75W, do th, 25W, op onnector mini DP cminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 AG 2GE 2GE	x16, full l x4, full h x16, full h height, full x4, full h demory B DDR3 3 GDDR5	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W 30W	II leng f lengt II leng 25W f lengt Co 8x 3x 4x	th, 75W, do th, 25W, op th, 75W, do th, 25W, op onnector mini DP tminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 AG 2GE 2GE	x16, full he x4, full he x16, full he x4,	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W 30W 45W 40W	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP kminiDP kminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 M 4G 2GE 2GE 2GE	x16, full la x4, full he x16, full height, full kx4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W 30W 45W 40W	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x 4x	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP cminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 AG 2GE 2GE 4GE 4GE 5GE	x16, full la x4, full he x16, full height, full la x4, full height, full la x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W 30W 45W 45W 50W	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x 4x	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP cminiDP cminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 AG 2GE 2GE 4GE 4GE 5GE	x16, full la x4, full he x16, full height, full kx4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful Il length, 2 eight, half Pow- er 68W 30W 45W 45W 50W	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x 4x	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP cminiDP	en endec ouble-wid en endec SLI/N	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P620 Quadro P1000 Quadro P2000 Quadro P2000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full la x4, full height, full la x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful II length, 2 eight, half Power er 68W 45W 40W 50W 75W 120W X180W	II lengt lengt lengt lengt lengt lengt lengt lengt lengt Co 8x 3x 4x 4x 4x DVI-D	tth, 75W, do th, 25W, op tth, 75W, do th, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP dxDP dxDP dxDP	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P4000 Quadro P4000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro P5000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, full x4, full height, full x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful II length, 2 eight, half Power 68W 45W 40W 50W 75W 120W X180W X250W	II lengt len	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP dxDP 0 DL+4xDP 0 DL+4xDP	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P4000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, full x4, full height, full x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful II length, 2 eight, half Power 68W 45W 40W 50W 75W 120W X180W X250W	II lengt len	tth, 75W, do th, 25W, op tth, 75W, do th, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP dxDP dxDP dxDP	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P6000 Quadro P6000 Quadro P6000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x4, full he x16, full height, full x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 40W 50W 75W 120W X180W X250W	Il lengg flengt flengt lengt lengt lengt lengt compared to the second se	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP dxDP 0 DL+4xDP 0 DL+4xDP	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro RTX 4000 Quadro RTX 4000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, full height, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5	height, ful eight, half height, ful II length, 2 eight, half er 68W 30W 45W 45W 40W 50W 75W 120W X180W X250W 160W(3 6) 265W 4	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x 4x 4x DVI-D DVI-D xDP, 1 xDP, 1	tth, 75W, do th, 25W, op tth, 75W, do tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP dxDP dxDP D DL+4xDP D DL+4xDP dxVirtualLir	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P7000 Quadro P6000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, f	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 40W 50W 120W X180W X250W 160W3: 6 265W4:	II lengt flengt flengt flengt lengt lengt lengt co Sx 3x 4x 4x 4x 2x 2x 2x 2x 2x 2x 2x 2x 2x 2x 2x 2x 2x	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP dxDP 4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P2000 Quadro P2000 Quadro P4000 Quadro P4000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P75000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, f	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 40W 50W 120W X180W X250W 160W 36 265W 45 295W 45 295W 45	II leng f lengt II leng 25W f lengt Co 8x 3x 4x 4x 4x DVI-D xDP, 1 xDP, 1 xDP, 1	tth, 75W, do th, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP 4xDP 4xDP 0 DL+4xDP 1xVirtualLir txVirtualLir	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P7000 Quadro P600 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full la x4, full height, full la x4, full height, full la x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6	height, ful eight, half height, ful ll length, 2 eight, half Power er 68W 45W 40W 50W 75W 120W X180W X250W 160W3: 6 295W4: 6 295W4: 235W 1	Il leng f lengt Il leng 25W f lengt Co 8x 4x 4x 4x 4x DVI-D DVI-D xDP, 1 xDP, 1 xDP, 1 xDP, 1 xDP, 1	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP 4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir D DL, 4xDI D DL, 4xDI	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P7000 Quadro P6000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, full k4, full height, full x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6	height, ful eight, half height, ful II length, 2 eight, half Power er 68W 30W 45W 40W 50W 120W X180W X250W 160W3 5 265W45 6 295W4 235W1 250W	Il leng f lengt Il leng 25W f lengt Co 8x 4x 4x 4x 4x DVI-D DVI-D xDP, 1 xDP, 1 xDP, 1 xDP, 1 xDP, 1	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP dxDP 0 DL+4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P6000 Quadro P6000 Quadro P7000 Quadro P6000 Quadro P7000 Storage Controll	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x4, full he x16, full height, full x4, full height, full x4, full hemory B DDR3 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR5 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6 B GDDR6	height, ful eight, half height, ful II length, 2 eight, half Power 68W 30W 45W 40W 50W 75W 120W X180W X250W 160W3: 6 295W4: 6 295W4: 6 295W4: 235W1 250W Interface	Il lengt flengt flengt flengt flengt flengt flengt flengt flengt Co 8xi 4x 4x 4x 4x DVI-E DVI-E DVI-E xDP, 1 xXDP, 1 xXDP, 1	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP dxDP dxDP dxDP dxDP dxDP dxDP dx	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P7000 Quadro P6000 Quadro P7000	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, f	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 45W 40W 50W 75W 120W X180W X250W 160W3: 6 295W4: 6 295W4: 235W1 250W nterface	Il lengt flengt	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP dxDP 0 DL+4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P6000 Quadro P6000 Quadro P7000 Quadro P6000 Quadro P7000 Storage Controll	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full height, full height, full la x4, full height, full s4, full height, full h	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 40W 50W 120W X180W X250W 120W X250W 160W3: 6 295W4: 235W 1 250W 1250W	Il lengt flengt	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP dxDP dxDP dxDP dxDP dxDP dxDP dx	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics Offering	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P70000 Quadro P70000 0 Quadro P70000 0 Quadro P70000 00	PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full height, full height, full height, full height, full s4, full height, full height, full height, full s4, full height, full heig	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 40W 50W 120W X180W X250W 160W 35 265W 45 235W 1250W	Il lengt f lengt f lengt f lengt f lengt f lengt f lengt f lengt Co 8xi	tth, 75W, do tth, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP dxDP 0 DL+4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 0 DL, 4xDP 0 DL, 4xDP 0 DL, 4xDP 0 DL, 4xDP	uble-widen endecuble-widen end	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics Offering	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P1000 Quadro P2000 Quadro P4000 Quadro P7000 Storage Controll Onboard Intel R5	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x4, full he x16, full height, full height, full sx4, full height, full sx4, full height, full hei	height, ful eight, half height, ful II length, 2 eight, half Power er 68W 30W 45W 40W 50W 120W X180W X250W 120W X180W X250W 120W X180W X250W 1250W 1250W 1250W 1265W 1250W 1266W 1266W 1266W 1266W 1260W 126	Il lengt f lengt f lengt f lengt f lengt f lengt f lengt f lengt Co 8xi	tth, 75W, do th, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 0 DL, 4xDI 0/1/10/5 0/1/10/5	suble-widen endecuble-widen en	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics Offering	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P2000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P7000 Storage Controll Onboard Intel R5 9440-8i PCle	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x16, full height, full height, full x4, full height, full x4, full height, full x4, full height, full x6, full height, full x6, full height, full x6, full height, full x6, full height, full x6, full height, full x6, full height, full height, full x6, full height, fu	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 45W 40W 50W 75W 120W X180W X250W 160 295W4: 235W 11 250W nterface ATA 6Gb/s 12Gb/s, S 6Gb/s 12Gb/s, S	Il lengt flengt	tth, 75W, do th, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP 0 DL+4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI	suble-widen endecuble-widen en	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P600 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P7000 Quadro	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full he x4, full he x16, full height, full height, full x4, full height, full sx4, full height, full height, full sx4, full height, full height, full sx4, full height, fu	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 50W 120W X180W X180W X250W 120W X250W 1250W 235W 1 250W 1250W 1	Il lengt flengt flengt flengt flengt flengt flengt flengt flengt Co 8xx 4x 4x 4x 4x DVI-E DVI-E TxDP, 1 xDP, 1 xDP, 1 xDT, 1	tth, 75W, do th, 25W, op tth, 25W, op onnector mini DP miniDP miniDP miniDP tminiDP tm	suble-widen endecuble-widen en	th I I I I I I I I I I I I I I I I I I I
Memory Protection Expansion slots Discrete Graphics Offering	ECC Slot 1 (CPU) F Slot 2 (CPU) F Slot 3 (PCH) F Slot 4 (CPU) F Slot 5 F Slot 6 (PCH) F Graphics NVS 810 Quadro P400 Quadro P600 Quadro P600 Quadro P600 Quadro P2000 Quadro P2000 Quadro P4000 Quadro P5000 Quadro P5000 Quadro P5000 Quadro P7000 Storage Controll Onboard Intel R5 9440-8i PCle	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	x16, full la x4, full height, full height, full height, full height, full standard s	height, ful eight, half height, ful II length, 2 eight, half Pow- er 68W 30W 45W 45W 40W 50W 75W 120W X180W X250W 160 295W4: 235W 11 250W nterface ATA 6Gb/s 12Gb/s, S 6Gb/s 12Gb/s, S	Il lengt f lengt f lengt f lengt f lengt f lengt f lengt f lengt con axis f lengt f le	tth, 75W, do th, 25W, op tth, 25W, op onnector mini DP cminiDP cminiDP cminiDP dxDP 4xDP 0 DL+4xDP 0 DL+4xDP 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 1xVirtualLir 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI 0 DL, 4xDI	suble-widen endecuble-widen en	th I I I I I I I I I I I I I I I I I I I

	Disk Type	Interface	RPM	Offering	Max Qty					
	3.5" SATA	SATA			·					
	HDD 2.5" SATA	6Gb/s SATA	7.2K	1TB/2TB/4TB/6TB	6					
Storage Sup-	HDD	6Gb/s	7.2K	500GB/500GB FIPS	6					
port	2.5" SATA SSD	SATA 6Gb/s		256GB/512GB/1TB/2TB	6					
	M.2 PCIe SSD	PCIe NVMe		256GB/512GB/1TB/2TB	9					
	PCIe AIC SSD	e AIC SSD PCIe NVMe 480GB 2 (1 when quad adapter used								
	Bay Type									
Storage Bays	Type M.2 slot 9x M.2 SSD (2 onboard, 7 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 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									
				sks with 4 disk bays (2 ba						
Max Storage	Supports up to 9x M.2 SSD + 6x 3.5" HDD/6x 2.5" SATA disks/4x 2.5" SAS HDD + 1x PCle AlC SSD. All HDD: 36TB using 6x 3.5" HDD All SSD: 30.48TB using 6x 2.5" SATA SSD, 9x M.2 SSD, and 1x PCle AlC SSD									
Power supply		W, autosen	sing, 9	92%, 80 PLUS Platinum o 92%, 80 PLUS Platinum o						
Media reader	SD USB 2.0 ca reader on flex n		n mos	models. Optional UHS-II	15-in-1 USB 3.1 Gen 1					
Network interfaces	Integrated one ethernet or wire				ake-on-LAN. Optional PCIe					
WLAN + Bluetooth					11ac, Bluetooth 4.2, up to					
Security features	Power-on and a				TCG 2.0 compliant, switch					
Intel vPro	Intel vPro techn	ology supp	orted.	access panel lock, Kensir vPro requires Wireless-A	C 8265 if Wi-Fi is needed					
Intel AMT	Intel Active Mar									
Diagnostic	with Lenovo PC display on flex r	Diag-nostion	cs for	Android and iOS. Optiona	ndows. Photo-audio transfer al front 4-digit diagnostic					
	1 or 3-year limit	ed onsite se	ervice	with 9x5/NBD						
HD Audio	Realtek ALC66									
Front ports	4x USB 3.1 Ger (3.5mm)	1 (include:	s one	11W charging), 1x combo	o audio/microphone jack					
Rear ports	2x USB 2.0, 4x mic-in), 2x PS/2	USB 3.1 Ge	en 1, 1	x RJ-45, 3x analog audio	ports (line-in, line-out,					
Optional ports	Front: • 2x Thunderbo supports vide • 1x eSATA on 1 • 1x USB Type-Rear:	lt ports (US o-out flex module	,,	e-C) on flex module, one USB 3.1 Gen 1	of two ports					
	1x COM port2x USB Type- Internal:1x internal US			adapter, USB 3.1 gen 2.0	One 15W, one 5W					

ThinkStation P520 Platform Specifications - II of II

Environmental	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)
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	RoHS-compliant. GREENGUARD. E qualified on model 30BE0008US and	PEAT Silver rating. ENERGY STAR 6.1 d 30BE0009US
ISV certifications	Please visit www.thinkworkstations.c	com/isv-certifications/

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





ThinkStation P520c Platform Specifications

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

Max Storage	Supports up to 5x M.2 SSD + 4x 3. All HDD: 24TB using 4x 3.5" HDD							
Dannar annards	All SSD: 18TB using 4x 2.5" SATA S							
Power supply	One fixed 500W, autosensing, 92%							
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1 reader on flex module							
Network interfaces	Integrated one gigabit ethernet (Intel i219LM), supports Wake-on-LAN. Optional PCIe ethernet or wireless adapters are available							
WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 23 to 867Mbps	(2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up						
Security features	switch to 1.2 via UEFI setting. Option	sted Platform Module, TCG 2.0 compliant, onal access panel lock, Kensington lock, and						
Intel vPro	needed	Pro requires Wireless-AC 8265 if Wi-Fi is						
Intel AMT	Intel Active Management Technolog	yy 11						
Diagnostic	flex module	ws. Optional front 4-digit diagnostic display on						
Base warranty	1 or 3-year limited onsite service wi	th 9x5/NBD						
HD Audio	Realtek ALC662 codec							
Front ports	2x USB 3.1 Gen 1, microphone (3.5	5mm), headphone (3.5mm)						
Rear ports	mic-in), 2x PS/2	RJ-45, 3x analog audio ports (line-in, line-out,						
Optional ports Environmental	Supports the following optional port Front: • 2x Thunderbolt ports (USB Type-C supports video-out • 1x eSATA on flex module • 1x USB Type-C on flex module, U Rear: • 1x COM port • 2x USB Type-C ports via PCIe ad Internal: • 1x internal USB 3.1 Gen 1 port Temperature - operating Temperature - storage (no package) Temperature - storage (with package)	C) on flex module, one of two ports SB 3.1 Gen 1 apter, USB 3.1 gen 2. One 15W, one 5W 50 °F to 95 °F (10 °C to 35 °C) 14 °F to 140 °F (-10 °C to 60 °C) -40 °F to 140 °F (-40 °C to 60 °C)						
specification	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m- 3048m)						
1	Humidity - operating	10%~80%, non-condensing						
	Humidity - storage (with package)	10%~90%, non-condensing						
Environmental Certifications	qualified on model 30BX0008US at							
ISV certifications	Please visit www.thinkworkstations	.com/isv-certifications/						
	Bay Type	Maximum Drives Qty						
	M.2 slot 5x M.2 SSD (2 onboard, 3 via PCIe to M.2 adapter)							
Storage Bays	2 flex bays. Supports the f 2x half-height optical dr 2x 5.25" 9.0mm optical 1x 5.25" 9.0mm optical 1x 3.5"/2.5" SATA SSD/ Flex Bay 1x flex module for the form the f	following: ives drives drive + 2x 3.5"/2.5" SATA SSD/HDD HDD with Front Access Storage Enclosure following options: Gen 1 reader, 2x Thunderbolt, or 4-digit diag- 3.1 Gen 1 Type-C or eSATA ant Removable Drive Enclosures						
	Disk bay Up to 2x 3.5"/2.5" disks w	IIII Z UISK 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













Expansion slots

Slot 1 (CPU2) PCle 3.0 x16, full height, full length, 75W
Slot 2 (CPU1) PCle 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) 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

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

ThinkStation P720 Platform Specifications

Form factor	36L Tower						
Dimensions	175mm/6.89" W x 48				6" H (with f	eet)	
Weight	Maximum configurati	on: 52.2	5 lb (23.7	'kg)			
Processor Sockets	2x FCLGA3647	1 0	01.1.1	٧ ٥			D 0:
Processor Support	Up to two 165 W Gerver, Gold, or Platinur		en 2 Intel	Xeon Sca	alable family	y processo	ors, Bronze, Si
	Processor	# of	# of	Base	Cacho	TDP	Momory Typo
				Frequenc	Cache		Memory Type
	Xeon Gold 6246	12	24	3.3GHz			DDR4-2933
	Xeon Gold 6244	8	16	3.6GHz		150W	DDR4-2933
	Xeon Gold 6242	16	32	2.8GHz		150W	DDR4-2933
	Xeon Gold 6238T	22	44	1.9GHz	30MB	125W	DDR4-2933
	Xeon Gold 6234 Xeon Gold 6230	20	16 40	3.3GHz		130W 125W	DDR4-2933
	Xeon Gold 6226	12	24	2.1GHz 2.7GHz		125W	DDR4-2933 DDR4-2933
	Xeon Gold 5222	4	8	3.8GHz		105W	DDR4-2933
	Xeon Gold 5218	16	32	2.3GHz		125W	DDR4-2666
	Xeon Gold 5217	8	16	3.0GHz		115W	DDR4-2666
	Xeon Gold 5215	10	20	2.5GHz			DDR4-2666
	Xeon Silver 4216	16	32	2.1GHz		100W	DDR4-2400
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W	DDR4-2400
	Xeon Silver 4214	12	24	2.2GHz		85W	DDR4-2400
	Xeon Silver 4210	10	20	2.2GHz		85W	DDR4-2400
	Xeon Silver 4209T	8	16	2.2GHz		70W	DDR4-2400
Processor Offering		8	16	2.1GHz		85W	DDR4-2400
	Xeon Bronze 3204	6 T 04	6	1.9GHz		85W	DDR4-2133
	Xeon Platinum 8160		48	2.1GHz	33MB	150W	DDR4-2666
	Xeon Gold 6146	12	24	3.2GHz		165W 150W	DDR4-2666
	Xeon Gold 6142 Xeon Gold 6136	16 12	32 24	2.6GHz 3.0GHz			DDR4-2666 DDR4-2666
	Xeon Gold 6134	8	16	3.2GHz			DDR4-2666
	Xeon Gold 6128	6	12	3.4GHz			DDR4-2666
	Xeon Gold 5122	4	8	3.6GHz			DDR4-2666
	Xeon Gold 5120T	14	28	2.2GHz			DDR4-2400
	Xeon Gold 5118	12	24	2.3GHz			DDR4-2400
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400
	Xeon Silver 4116	12	24	2.1GHz			DDR4-2400
	Xeon Silver 4114T	10	20	2.2GHz			DDR4-2400
	Xeon Silver 4114	10	20	2.2GHz			DDR4-2400
	Xeon Silver 4112	4	8	2.6GHz		85W	DDR4-2400
	Xeon Silver 4110	8	16	2.1GHz		85W	DDR4-2400
	Xeon Silver 4109T Xeon Silver 4108	8	16 16	2.0GHz 1.8GHz		70W 85W	DDR4-2400 DDR4-2400
Chipset	Intel C621 Chipset		10	1.00112	ITIVID	0344	DDI 14-2400
Memory Sockets	12 DIMM sockets wit	h 12 cha	nnals 6	DIMM soc	kate with 6	channels	ner nrocessor
Memory Types	DDR4-2666 RDIMM	11 12 0116	1111613.0	DIIVIIVI 300	Kets With O	CHAIIIICIS	per processor
Memory Capacity	768GB (DDR4-2933	DDIMM	or 2010	D (DDD4	acce DDII	41 A\	
Memory Protection		רטוועוועו)	01 3040	אוטט) טו	-2000 NDIII	/IIVI)	
Womony i rotcotton		20 16	full boio	ht full lon	ath 75\M		
				ht, full len		امنين مامانيما	IAI _n
					gth, 75W, c		
Expansion slots					th, 25W, op		
					gth, 75W, c	double-wid	ith
	Slot 5 PCI,	full heigh	nt, full ler	ngth, 25W			
	Slot 6 (PCH) PCIe	3.0 x4,	full heigh	t, half len	gth, 25W, o	pen ende	<u></u> _
	Graphics	Memo	,		Connector	SLI /	
	10.00			er		NVIinl	
	NVS 810	4GB DI			xmini DP		2
	Quadro P400 Quadro P600	2GB GD			<u>SxminiDP</u>		3 3
Discrete Graphics	Quadro P620	<u>2GB GD</u> 2GB GD			xminiDP xminiDP		
	Quadro P1000	4GB GD			xminiDP	+	3
Offering							
Offering	Quadro P2000	SGR GD	DR5 74	5W	49DP		3 1
Offering	Quadro P2000	<u>5GB GD</u> 8GB GD		5W 20W	4xDP 4xDP		3 2
Offering	Quadro P2000 Quadro P4000	8GB GD		:0W	4xDP 4xDP D DL+4xDI	P SLI	2 2

					-					
	Graphics		lemory		Pow-		onnecto		SLI / NVlink	Max Qtv
	Quadro RTX 400	00 8GE	GDD	R6	160W	3xDP,	1xVirtua	alLink	(2
Discrete Graphics	Quadro RTX 500	00 16GI	B GDD	PR6	265W 4	4xDP,	1xVirtua	alLink	(1
Offering	Quadro RTX 600	00 24G	B GDD	R6	295W	4xDP,	1xVirtua	<u>alLink</u>	(11
	Quadro RTX 800	00 48G	B GDL	16 10	295W	1xDP,	1xVirtua	alLink	(1 1
	Quadro GP100 Quadro GV100				235W 250W	IXDVI	<u>-D DL, 4</u> 4xDP	+XDP		1
		=							Cook	<u> </u>
	Storage Controll Onboard Intel				ace		AID		Cach	<u>e</u>
	RSTe	Std	SA	TA 6	6Gb/s	0/1	/10/5			
	9440-8i PCle	Opt			2Gb/s, 3Gb/s	0/1	/10/5			
Storage Controller	9460-16i PCle	Opt	SAS	3 12	2Gb/s, 3Gb/s	0/1/	10/5/6	4GE	B DDR4, S	SuperCap
	NVMe Basic	Opt	PC	le N	IVMe	0/	1/10			
	NVMe Premium	Opt	PC	le N	IVMe	0/1	/10/5			
	NVMe for Intel SSD	Opt	PC	le N	IVMe	0/1	/10/5			
	Disk Type	Interfac	e BF	PM		Offeri	na		Max	Qty
	Disk Type	intoria				Onon	''9		(Blind co	nnection used)
										supports
	3.5" SATA HDD	CATA GO	h/0 7	ok/	1TD	/OTD / A	TD/6TD	,	` addit	tional
	3.5 SAIA HUU	SAIA OC	10/5 /	∠r∖	1TB/2TB/4TB/6TB			'		" SATA
Storage Support	O EII CATA LIDD	2 ATA CC	No /o 7 /		F000	D/F00	OD FID			HDD)
2	2.5" SATA HDD \$						<u>GB FIP</u> 00GB	5		<u>0</u>
	2.5" SATA SSD	SATA 60	h/s		256GB/			TR		0
	2.5" PCIe SSD I	Cle NV	'Me			1.5T				2
	M.2 PCIe SSD I	PCIe NV	le NVMe 256GB/512GB/1TB/2TB			2TB	9			
	PCIe AIC SSD I	PCle NV	'Me			4800	àB			2
	Bay Type				Maximu	ım Dri	ves Qty	,		
	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter)									
	2 flex bays. Supports the following:									
	• 2x half-height optical drives									
	 2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 1x 3.5"/2.5" SATA SSD/HDD 									
	41/0	5"/2.5" S	SATA S	SD	/HDD w	ith Fro	nt Acce	ss St	torage En	closure
	• 1x fle	x modul	le for th	ne f						
0. 5	Tray	1: 9.0mr	n optic	al .						
Storage Bays	Iray 2	2: 15-in- 1 and 2:	1 USB	3.1	Gen 1	reade	r or 2x	hund	derbolt	
		.2 SSD 1								
										of the fol-
		configur			,	,,	,.			
		" SATA						·-··		
			HDD +	4x	2.5" SA	TA SS	D/HDD	(Blin	d connec	tion
	needed		SSD/H	חח	or 8v 2	5" SA	S HDD	(Blin	d connec	tion
	needed		OOD/II	טט	01 07 2	.5 0/	ט ווטט	(DIIII)	a connec	11011
			SSD +	2x :	3.5"/2.5	" disks	(Blind	conn	ection ne	eded)
	Supports up to 9									
Max Storage	PCIe AIC SSD.									
max otorago	All HDD: 36TB us				ATA 00	D 0 - 1	4000		-l 0 DO:	AIO 005
	All SSD: 38.96TE	s using '	IUX 2.5	5	AIA SS	D, 9X I	vi.2 SSL	ر, and	a 2x PCIe	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	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1 reader on flex module						
Network interfaces	LAN on both two ports. Optional PCIe						
WLAN + Bluetooth	to 867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up					
Security features	switch to 1.2 via UEFİ setting. Chassis lock, Kensington lock, and pad lock	ed Platform Module, TCG 2.0 compliant, sintrusion 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						
Diagnostic		n Diagnostics for Windows. Photo-audio for Android and iOS. Optional front 4-digit					
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 (3.5mm)	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,					
Optional ports	Supports the following optional ports: Front: 2x Thunderbolt ports (USB Type-C) supports video-out 1x eSATA on flex module 1x USB Type-C on flex module, USE Rear: 1x COM port 2x USB Type-C ports via PCIe adap Internal: 1x internal USB 3.1 Gen 1 port	,					
Environmental specification	Temperature - operating Temperature - storage (no package) Temperature - storage (with package) Altitude - operating Humidity - operating Humidity - storage (with package)	50 ° F to 95 ° F (10 ° C to 35 ° C) 14 ° F to 140 ° F (-10 ° C to 60 ° C) -40 ° F to 140 ° F (-40 ° C to 60 ° C) (Unpressurized): 0-10000ft (0-3048m) 10%~80%, non-condensing 10%~90%, non-condensing					
Environmental Certifications	RoHS-compliant. GREENGUARD. EF fied on model 30BA0007US and 30BA	EAT Silver rating. ENERGY STAR 6.1 quali- A0008US					
ISV certifications	Please visit www.thinkworkstations.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. 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 620	mm/24.4	" D x 446	3mm/17.56"	H (with feet)				
Weight	Maximum configuration	n: 71.3 lb	(32.3kg)					NVS 810	4GB
Processor Sockets	2x FCLGA3647							1	Quadro P400	2GB
	Up to two 205 W Gen	1 or Gen	2 Intel X	(eon Scalable	e family pro	cessors.	Bronze, Sil-		Quadro P600	2GB
Processor Support	ver, Gold, or Platinum					,	,		Quadro P620	2GB
	, ,	# of	# of	Base			Memory		Quadro P1000	4GB
	Processor	Cores	Threads	Frequency	Cache	TDP	Types	Discrete Graphics	Quadro P2000	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		Quadro P5000	16GB
	Xeon Gold 6244	8	16	3.6GHz	25MB	150W	DDR4-2933		Quadro P6000	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	DDR4-2933		Quadro RTX 500	
	Xeon Gold 6234	8	16	3.3GHz	25MB	130W	DDR4-2933		Quadro RTX 600	
	Xeon Gold 6230	20	40	2.1GHz	28MB	125W	DDR4-2933		Quadro RTX 800	
	Xeon Gold 6226	12	24	2.7GHz	19MB	125W	DDR4-2933		Quadro GP100	16GE
	Xeon Gold 5222	4	8	3.8GHz	16.5MB	105W	DDR4-2933		Quadro GV100	32GE
	Xeon Gold 5218	16	32	2.3GHz	22MB	125W	DDR4-2666		Storage Controll	
	Xeon Gold 5217	8	16	3.0GHz	11MB	115W	DDR4-2666		Onboard Intel R	
	Xeon Gold 5215	10	20	2.5GHz	13.75MB	85W	DDR4-2666		9440-8i PCle	Opt
	Xeon Silver 4216	16	32	2.1GHz	22MB	100W	DDR4-2400	Storage	9460-16i PCIe	Opt
	Xeon Silver 4215	8	16	2.5GHz	11MB	85W	DDR4-2400	Controller		
	Xeon Silver 4214	12	24	2.2GHz	17MB	85W	DDR4-2400		NVMe Basic	Opt
	Xeon Silver 4210	10	20	2.2GHz	14MB	85W	DDR4-2400		NVMe Premium	
Dua	Xeon Silver 4209T	8	16	2.2GHz	11MB	70W	DDR4-2400		NVMe for Intel S	SD Opt
Processor Offering	Xeon Silver 4208	8	16	2.1GHz	11MB	85W	DDR4-2400		Disk Type II	nterface RF
	Xeon Bronze 3204	6	6	1.9GHz	8.25MB	85W	DDR4-2133		2.0.K 1, po	
	Xeon Platinum 8160T	24	48	2.1GHz	33MB	150W	DDR4-2666		3.5" SATA	SATA 7
	Xeon Gold 6154	18	36	3.0GHz	24.75MB	200W	DDR4-2666	6	HDD	6Gb/s 7.5
	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	2.5" SAS HDD	12Gb/s
	Xeon Gold 5122	4	8	3.6GHz	16.5MB	105W	DDR4-2666	Storage Support	2.5" SATA	SATA
	Xeon Gold 5120T	14	28	2.2GHz	19.25MB	105W	DDR4-2400		SSD	6Gb/s
	Xeon Gold 5118	12	24	2.3GHz	16.5MB	105W	DDR4-2400		2.5" PCIe SSD	PCIe
	Xeon Gold 5115	10	20	2.4GHz	13.75MB	85W	DDR4-2400		2.5 FOIE 33D	NVMe
	Xeon Silver 4116	12	24	2.1GHz	16.5MB	85W	DDR4-2400		M.2 PCIe SSD	PCIe
	Xeon Silver 4114T	10	20	2.2GHz	13.75MB	85W	DDR4-2400		IVI.Z T OIE SSD	NVMe
	Xeon Silver 4114	10	20	2.2GHz	13.75MB	85W	DDR4-2400		PCIe AIC SSD	PCIe
	Xeon Silver 4112	4	8	2.6GHz	8.25MB	85W	DDR4-2400		I OIC AIO OOD	NVMe
	Xeon Silver 4110	8	16	2.1GHz	11MB	85W	DDR4-2400		Bay	
	Xeon Silver 4109T	8	16	2.0GHz	11MB	70W	DDR4-2400		Туре	
	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
Memory Sockets	16 DIMM sockets with	12 chan	nels. 8 D	IMM sockets	with 6 cha	nnels pe	r processor		• 3x ha	alf-height o
Memory Types	DDR4-2666 RDIMM, D								• 2x 5.	25" 9.0mm
Memory Capacity	1TB (DDR4-2666 LRD						SEE BUIMM)	-	• 1x 5.	25" 9.0mm
Memory Protection		TIVIIVI OI I	DDI 14-23	OO I (DIIVIIVI)	0131200 (DDI 14-20	JOO I IDIIVIIVI)		Elov Pov • 1x 3.	5"/2.5" SAT
Memory Protection	CLATA (OBLIA) BOLL		Collina de la Carla d		75147 -1			Storage Bays	IX IIE	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, 1	ruii neign	t, tull length,	/5VV, doub	e-wiath		Otorage Days	Tray	1: 9.0mm c
	Slot 3 (CPLI1) PCIe 3	0.0 X4, IU 1 N v16 f	iii Height, full baidh	iuii ierigiii, z t full lanath	75W, open e	o-width				2: 15-in-1_l
	Slot 4 (CPU1) PCIe 3	0.0 x 10, 1	ıll heiaht	full length 2	5W open e	nded				1 and 2: Fr
Expansion slots	Slot 5 (PCH) PCIe 3	3.0 x4. fu	II height.	half length.	25W. open	ended				.2 SSD wit
	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, 2 full length, 2 t, full length, full length, 2 half length, 2 t, half length, t, full length, t, full length,	, 75Ŵ -					drives with
	Slot 7 (CPU2) PCIe 3	3.0 x16, f	iull heigh	t, full length,	75W, doub	e-width			one of	the followin
	Slot 8 (CPU2) PCle 3	3.0 x16, f	ull heigh	t, tull length,	75W]	Disk bay • 4x 3.5	SAIA HL
								1	□ P 4X 3.5	5" SATA HD
										" SATA SS

	Graphics		NAC	ma	r) /	Power	Conn	SLI /	Max	
	Grapriics		IVIE	mo	ıy	rowei	Connector		NVlink	Qtv
	NVS 810		4GB			68W	8xmin			2
	Quadro P400		2GB			30W	3xmir			5
	Quadro P600		2GB			45W	4xmir			4
	Quadro P620		2GB			40W	4xmir			4
	Quadro P1000		4GB			50W	4xmir 4xD			4 4
Discrete Graphics	Quadro P2000 Quadro P4000		5GB 8GB			75W 120W		-		4
Offering	Quadro P5000	1				180W			SLI	3
	Quadro P6000					250W			SLI	3
	Quadro RTX 40		8GB				3xDP, 1xV		<u> </u>	3
	Quadro RTX 50				DR6		4xDP, 1xV		NVLink	3
	Quadro RTX 60		24GB	GD	DR6	295W	4xDP, 1xV	irtualLink	NVLink	2
	Quadro RTX 80		48GB				4xDP, 1xV			2
	Quadro GP100		16GE				1xDVI-D D			3
	Quadro GV100		32GE	3 HE	<u>BM2</u>	250W	4xD)P	NVLink	3
	Storage Contro		Type			nterfac		RAID	Ca	che
	Onboard Intel F	RSTe	Std			ATA 6G		0/1/10/5		
01	9440-8i PCle		Opt	SA	AS 12G	ib/s, SA	ATA 6Gb/s	0/1/10/5		2004
Storage Controller	9460-16i PCIe		Opt	SA	AS 120	ib/s, SA	ATA 6Gb/s	0/1/10/5/		DDR4, erCap
	NVMe Basic		Opt		P	Cle NV	Me	0/1/10		лоцр
	NVMe Premium		Opt			Cle NV		0/1/10/5		
	NVMe for Intel:	SSD	Opt		P	Cle NV	Ме	0/1/10/5	5	
	Disk Type	Interfa	ce RF	M	Offering				Max Qty	
3	2.01. 1,70					0	9		460 used)
	3.5" SATA	SATA		אכ	1 T D	/2TR/4	TD/6TD	6 (Also supports additiona		
	HDD	6Gb/	S	7.2K		1TB/2TB/4TB/6TB			4x 2.5" SATA SSD/HDI	
	2.5" SATA	SATA		ρĸ	5000	B/500	GB FIPS	10		
	HDD	6Gb/	S	-:`		л В / ООО	GB 1 11 C			
	2.5" SAS HDD	SAS 12Gb)K	300GB/600GB			8		
Storage Support	2.5" SATA	SATA								
	SSD	6Gb/		- 1	256GB/512GB/1TB/2TI				10	
	2.5" PCIe SSD	PCI			1.5TB			4		
	2.5 TOTE 55D	NVM		_	1.310			4		
	M.2 PCIe SSD	PCI6 NVM			256GB/512GB/1TB/2TB			9		
	DOI: 410.00D	PCI		\neg		4000	\D	0		
	PCIe AIC SSD	NVM	е			480G	iB		2	
	Bay				M	aximur	n Drives Qt	ty		
	Type		(0					. \		
	M.2 slot 9x M.2							apter)		
					al drive		following:			
					tical dr					
							x 3.5"/2.5"	SATA SSI	D/HDD	
	a 1v3						Front Acc			ure
Storage Bays	riex bay 1x fl	ex mo	dule f	or t	he follo		ptions:		0	
Sidiage Days	Tray	1: 9.0)mm c	ptic	cal	_				
							ader or 2x			
							1 Type-C			
							vable Drive			orto
						ations:	andard, 2 b	Jays Uplio	maij. Supp	10115
	Disk bay • 4x 3.				ormgui	alions.				
	• 4x 3.	5" SAT	TA HD	Ď+	- 4x 2.5	5" SATA	SSD/HDE)		
	• 8x 2.	5" SAT	TA SS	D/H	IDD or	8x 2.5	" SAS HDD)		
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ThinkStation P920 Platform Specifications

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	Supports up to 9x M.2 SSD + 6x 3.5" AIC SSD.	HDD/10x 2.5" SSD/10x 2.5" HDD + 2x PCle							
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 PCle AIC SSD								
	One fixed 1400 watts, autosensing, 92								
Power supply	Countries with input voltage under 115V, output power limited to 1125 watts								
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.1 Gen 1								
Network	reader on flex module	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	d Platform Module, TCG 2.0 compliant, sintrusion 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)	on flex module, one of two ports							
	supports video-out								
0	1x eSATA on flex module								
Optional ports	1x USB Type-C on flex module, USB 3.1 Gen 1 Page 1 Page 2 Page 2 Page 2 Page 3 Page 4 Page 3 Page 4 Page								
	Rear: • 1x COM port								
	 2x USB Type-C ports via PCle adapt 	ter. USB 3.1 gen 2. One 15W. one 5W							
	Internal:	,							
	1x internal USB 3.1 Gen 1 port								
	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)							
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)							
Environmental	Temperature - storage (with package)								
specification	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)							
•	Humidity - operating	10%~80%, non-condensing							
	Humidity - storage (with package)	10%~90%, non-condensing							
Environmental Certifications	RoHS-compliant. GREENGUARD. EP fied on model 30BC0008US and 30BC	EAT Silver rating. ENERGY STAR 6.1 quali-							
	Please visit www.thinkworkstations.co								

Note:

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

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

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

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

Lenovo Services:

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

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

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

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

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

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

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

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

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

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Summary of Changes

This section describes the technical changes made in this edition.

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

Feb, 2020 - Version 555

Additions in this update

► New product(s)

ThinkVision T32p-20

ThinkVision P24q-20

ThinkVision T34w-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 screen sizes with the ergonomic height adjustable effortlessly with mounting support for a hands-free viewing experience. The advanced low blue light technology minimizes eye strain, making extended working hours easy.



Tilt 0°~90° **Monitor Stand**

Height Adjustable Foot

Tilt -5°~90° **Eye-care Technology**



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



the monitor in the way that suits your style

14-inch

309.31 x 173.99 mm

Panel Type In-Plane Switching

Backlight **WLED**

Aspect Ratio 16:9

Dot/Pixel Per Inch (DPI/PPI)

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

Refresh Rate 60 Hz

300 cd/m²

3M:1

Colour Gamut NTSC (CIE 1931) 72%

Color Support (typical) 16.7 Million

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

Yes

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

(Pon) 4.88 W

output)

(E_{TEC}) 15.53 kWh

Mode < 0.3 W

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





Low blue light

Screen Dimensions (W x H, mm)

Resolution 1920 x 1080

157

Contrast Ratio (typical)

Dynamic Contrast Ratio (typical)

Color Depth

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

Power Consumption Sleep/Off

ENERGY STAR® Power Consumption



Tilt angle: 0°~90°

Remarkable flexibility: position

Panel Size

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

Response Time (typical) 6ms with OD

Brightness (typical)

Video Input Signals

ENERGY STAR® Power Consumption

Power Consumption Switch-Off Mode < 0.3 W **USB Type-C/Power Delivery**

Up to 65 W **Power Supply** External (no adapter bundle)

Voltage Required DC 5 V to 20 V

Tilt Angle (front/back)

Mounting Support Yes (100 mm) Kensington™ Lock Slot

-5° / 90°

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 /

(Lowest position)

10.87 x 2.40 x 15.83 inches Size Unpacked w/stand $(D \times H \times W) (mm / inch)$

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

96.54 x 220.03 x 323.37 mm / 3.8 x 8.66 x 12.73 inches

Stand base footprint area (mm²)

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

1.67 kg / 3.67 lbs. Weight Unpacked (kg / lbs.) 0.57 kg / 1.26 lbs.

260.87 x 69.55 mm /

1 x Monitor with stand

1x QSG

1x Pair of clips

1 x ThinkVision M14 sleeve

1 x USB Type-C cable (1 m)

Temperature - Operating 0° to 40°C

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

Humidity - Non-operating 30 to 90%

Altitude - Operating

Humidity - Operating

30 to 80%

0 to 5000 m

Yes

Altitude - Non-operating 0 to 40,000 ft

PVC free Yes Mercury free

Arsenic-free Glass

85%

PCC % of plastic resins

Geography Availability WW Warranty

ENERGY STAR® Rating 7.1

3 Years

CCC Yes **EPEAT**

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

Mercury free)

Windows 7 / 10 **Image Quality Capability** ISO 9241-307

Windows Certification



Yes (Low Bluelight)



Low Blue Light / Eye Comfort

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 Emission standards

FCC Class B TCO (TCO Displays 6.0), WEEE, RoHS, **EPEAT™ Silver rating** 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 Control features

Direct access (buttons on front) for automatic image setup, input switch, and brightness 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) Digital Visual Interface (DVI-D), digital, white, **HDCP-compliant** Signal cables

(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

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

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 Lenovo Security Cable Lock 45K1620 57Y4303 Lenovo Easy Reach Monitor Stand 55Y9258

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













T1714 Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FDHAR1US / 60FDHAT1EU

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

Viewable image size

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

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

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stand

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

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

Weight Limited warranty 5.75 lb; 2.61kg

3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

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

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

Rotating screen None

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

Control features

Multiple input

Monitor connectors

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

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

17-inch Square LCD monitor

Supports SXGA 1280x1024 resolution

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

Mercury Arsenic free glass

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

 Microsoft Windows 8.1 certified Microsoft Windows 10 certified



ThinkVision T1714 Monitor













T1714p Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FELAR1US / 60FELAT1EU

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

Viewable image size

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

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

Brightness 250 nits or cd/m2 (typical)

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

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

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

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

8.71 lb; 3.95kg

Weight Limited warranty 3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

Presets / user settings Standard presets: 22;

user settings: 22

Features

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



ThinkVision T1714p Monitor

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

Rotating screen None

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

Control features

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

Monitor connectors

Signal cables

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

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

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

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













Lenovo™ ThinkVision® T2054p Monitor

SPECIFICATIONS

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





Global Model

Yes











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

61B9JAR1US / 61B9JAT1EU Type-model

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

Viewable image size

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

Native resolution 1920x1080

Aspect ratio 16:9

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

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

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

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

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

Dimensions (HxWxD)

370.9mm H x 490.5mm W x 204.9mm D

18 watts typical, Power supply 23 watts maximum.

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

Weight

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

August 2017 Available date

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

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

SVGA: XGA: 1024x768, 1152x864

1920x1080

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

Presets display modes Standard presets: 22

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

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

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

USB hub None

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

Monitor connectors

Full HD:

Signal cables

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 20.7-inch monitor Supports 1920x1080 resolution

Supports ThinkCentre Tiny Clamp Bracket

· Supports optional soundbar

EPEAT Gold certified

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



ThinkVision F21 Wide Monitor

Lenovo August 2017













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

Type-model 61B7JAR6US / 61B7JAT6EU

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

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

Native resolution Aspect ratio 16:9

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

Brightness 250 nits or cd/m2 (typical)

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

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

Tilt adjustable stand Stand Bezel width

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

Power supply

18 watts typical, 23 watts maximum,

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

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

August 2017 Available date

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

Emission standards FCC Class B

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

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

SVGA: XGA: 1024x768, 1152x864

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

WSXGA+: 1680x1050 Full HD: 1920x1080

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

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

Rotating screen None

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

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

Multiple input

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

Signal cables

Mounting features

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

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 23.8-inch monitor

• Supports 1920x1080 resolution Supports ThinkCentre Tiny VESA mount

Supports optional soundbar

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision E24 Wide Monitor













P24h Wide Flat Panel Monitor Name Bezel color

Black

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

124 dpi

0.2058x 0.2058 mm

1000:1 (typical)

24 watts typical,

99% sRGB

300 nits or cd/m2 (typical)

4ms (extreme) / 6ms (typical)

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

373.4mm H x 540.2mm W x 261.75mm D

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

Viewable image size Max view area (W x H)

2560x1440 Native resolution 16:9

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

Contrast ratio Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date

12.54 lb; 5.69 kg

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

VESA-compliant Power management Ergonomics Emission standards Environmental

ENERGY STAR® qualified ISO 9241-307 FCC Class B

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

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

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

Rotating screen On screen display

Presets display modes

Control features USB hub Multimedia Camera

Multiple input Monitor connectors

Signal cables Mounting features Security

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

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

Limited Warranty

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

Screen pivots 90 degrees from landscape to portrait

On screen display with digital user controls (8 languages)

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

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

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

Features

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



ThinkVision P24h Wide Monitor

Accessories

Kensington MicroSaver Cable Lock

73P2582

See all monitors at www.lenovo.com/thinkvision	ı	
See details at www.lenovo.com/support/monitoraccessories		
Nensington (will flead Cable Lock	451(1020	
Kensington Twin Head Cable Lock	45K1620	













Lenovo ThinkVision P24q

P24q Wide Flat Panel Monitor Name

Case color Black

61A5GAR3US / 61A5GAT3EU Type-model

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

Viewable image size

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

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

Pixel pitch (mm) 0.2058 x 0.2058mm

Dot/Pixel per Inch 123 dpi

Brightness 300 nits or cd/m2 (typical)

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

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

Stand

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

Dimensions

(HxWxD, including stand) Power supply

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

67 watts maximum (with USB),

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

integrated (no external brick-like power supply)

12.35 lb; 5.6kg (including stand) Weight Limited warranty

3 year January 2017 Available date

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

Multiple input

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

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



ThinkVision P24q Monitor

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

WLFD

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

 $\leq 0.3W$

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

RoHS (EU 2002/95/EC)

Yes

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 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)

51°I.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 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 Eye Comfort

Yes















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

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T2224d Wide Flat Panel Monitor Name

Bezel color **Black**

Type-model 60EBJAR1US / 60EBJAT1EU Panel

TFT-LCD, Vertical Alignment panel (VA),

White LED backlight Viewable image size

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

Native resolution Aspect ratio 16:9

Pixel pitch (mm) 0.248 x 0.248 mm

Dot/Pixel per Inch 102 dpi

Brightness 250 nits or cd/m² (typical) Contrast ratio 3000:1 (typical)

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

Color gamut

Viewing angle at 10:1 CR

178° (+/- 89°) horizontal, 178° (+/- 89°) vertical

Stand Tilt stànd

Bezel width Sides: 0.69" (17.6mm)

Dimensions (HxWxD)

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

20 watts typical, 25 watts maximum Power supply

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

Weight Limited warranty 6.48 lb; 2.94 kg

3 year (includes backlight)

July 2016 Available date

VESA-compliant VESA DDC2B/CI

ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

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

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

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

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

Rotating screen None

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

USB hub None

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

Monitor connectors

Signal cables

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

Security

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 21.5-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 Silver certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



Think Vision T2224d Wide Monitor













T2254 Wide Flat Panel Monitor Name

Bezel color Raven black Type-model 60F6HAR1EU

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

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

Native resolution Aspect ratio 16:10

Pixel pitch (mm) 0.282 x 0.282 mm Dot/Pixel per Inch 90 dpi

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Bezel width

Dimensions (HxWxD)

380.2mm H x 509.3mm W x 244.2mm D

16 watts typical, Power supply 22 watts maximum,

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

Weight Limited warranty

Available date

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

Emission standards None

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

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

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

WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 26;

user settings: 20

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

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

Rotating screen

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

USB hub None

Multiple input

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

Monitor connectors

Signal cables

(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

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

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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













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 Stand

Tilt, swivel, pivot, and height adjustable stand Sides: 0.67" (17.1mm) 14.63" H x 20.01" W x 9.55" D; 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)

10.14 lb; 4.60 kg

3 year (includes backlight) Weight Limited warranty Available date March 2015

VESA-compliant Power management Ergonomics

Emission standards

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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



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

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

USB hub None

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

Monitor connectors

(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













ThinkVision T22i-10 MONITOR



SPECIFICATIONS

DISPLAY

(mm)

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

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

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

21.5" Wide 1920 x 1080

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

72% 16.7 Million 4/6/14 ms

DIMENSIONS (W x D x H)

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

(mm) (inches)

Size Monitor Head Only

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weight Packed

Unpacked Monitor Head Only

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

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

240 x 240 9.45" x 9.45"

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

CONNECTIVITY Video Input Signals

Video Cables Supplied (Length) Audio

OSD Languages

VGA + HDMI™ 1.4 + DisplayPort™ 1.2 18 m

Audio-Out

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

POWER CONSUMPTION

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

MECHANICAL

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

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

COMPLIANCE

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

Windows Certification Windows 7 / Windows 10

















ThinkVision T22V-10 MONITOR

SPECIFICATIONS

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

MECHANICAL

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

COMPLIANCE

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





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













T2324d Wide Flat Panel Monitor Name

Bezel color **Black**

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

Viewable image size

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

1920x1080 Native resolution

Aspect ratio 16:9

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

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

Color gamut 72%

Viewing angle at 10:1 CR

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

Stand Bezel width

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

400.3mm H x 545.8mm W x 204.9mm D

Power supply 20 watts typical, 27 watts maximum

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

Weight Limited warranty

7.06 lb; 3.20 kg

3 year (includes backlight)
June 2016

Available date

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

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768

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

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

Tilt: 22° back, -5° Viewing adjustments

Rotating screen None

On screen display

Control features USB hub

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

None

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

Monitor connectors

Signal cables

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

Security

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 23.0-inch monitor

• Supports 1920x1080 resolution · Supports optional soundbar

Supports ThinkCentre Tiny via VESA back mount

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

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision T2324d Wide Monitor

Lenovo July 2016













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

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

1920x1200

Features

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



ThinkVision T23d-10 Wide Monitor

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

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

WUXGA:













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

16:9

95.8 dpi

Type-model 61ABMAR1US / 61ABMAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight 23" (584.2mm) diagonal 20.36" x 11.92" (517.2mm x 302.8mm) 1920x1080

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

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

0.2652 x 0.2652 mm

1000:1 (typical)

6ms (typical)

250 nits or cd/m2 (typical)

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 Power management

Ergonomics Emission standards Environmental

Viewing adjustments

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600 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

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) Control features USB hub Multiple input (1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter Monitor connectors Signal cables (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

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

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

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision













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

300 nits or cd/m2 (typical)

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

integrated (no external brick-like power supply)

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

640x350, 640x480, 720x400

1680x1050, 1600x1200

1920x1080, 1920x1200

Screen pivots 90 degrees from landscape to portrait

Standard presets: 21; user settings: 20

1280x720, 1280x768, 1280x800

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

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

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

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

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

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

1000:1 (typical)

13.60 lb; 6.15 kg

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307

FCC Class B

VGA:

XGA:

SVGA:

SXGA:

WXGA:

WXGA+:

Full HD:

WSXGA+:

March 2015

3 year (includes backlight)

800x600

1024x768

1440x900

1280x1024

7ms (typical)

77.4%

Dot/Pixel per Inch Brightness Contrast ratio Pixel response time

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

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date VESA-compliant Power management

Ergonomics

Emission standards Environmental

Preset resolutions

Presets / user settings

Viewing adjustments Rotating screen On screen display Control features

USB hub Multiple input Monitor connectors

Signal cables

Mounting features Security Ship group

tail.page?DocID=UM008281

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

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

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock

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

See all monitors at www.lenovo.com/thinkvision

Features

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



ThinkVision T2454p Wide Monitor

73P2582

45K1620













ThinkVision T24d-10 MONITOR

SPECIFICATIONS

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

SIGNAL INPUT

Horizontal Ereguency

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

30 kHz - 83 kHz

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

SIGNAL INTERFACE / PERFORMANCE

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

ENVIRONMENTAL

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

MECHANICAL

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

COMPLIANCE

Warranty

Geography Availability

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

12.3

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)

POWFR

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)

Kensington Lock Slot

Yes

Cable Management

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 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) (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

CERTIFICATIONS

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















*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 3.1 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

WLED 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)

5

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

DIMENSIONS (W x D x H)

 Size Packed
 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

 (inches)
 21.26" x 10.3" x 14.7"

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

Size Unpacked without Stand (Monitor Head Only)

(mm) (inches)

Stand Base Footprint Area (mm)

(inches)
Weight
Packed
Unpacked

man, anese, Russian 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

Video Input Signals

VGA + HDMI™ 1.4 +

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

 Typical
 16.5 W

 Maximum
 55 W

 Sleep-Mode
 <0.5 W</td>

 Switch Off-Mode
 <0.3 W</td>

 Power Supply
 Internal

Power Voltage 90 VAC - 264 VAC

MECHANICAL

 Tilt Angle (Front / Back)
 -5°/ 30°

 Swivel Angle (Left / Right)
 +/-45°

 Lift Range (mm)
 110

 Pivot
 +/-90°

 Cable Management
 Yes

 Kensington* Lock
 Yes

 VESA* Mount (mm x mm)
 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 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 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.

















ThinkVision T24i-19 MONITOR



SPECIFICATIONS

DISPLAY

(inches)

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

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

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

Extreme / Normal **OSD Controls** Buttons Languages

23.8" Wide In-Plane-Switching WLED

FHD (1920 x 1080)

16:9 Yes Yes

> 527.04 x 296.46 20.75" x 11.67" 250 nits 178°/1789 1000:1 3M:1 2 x 2W 0.2745 x 0.2745 72% NTSC 8 hit 16.7 Million

4 ms / 6 ms

5

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

DIMENSIONS (W x D

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

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

21.26" x 10.3" x 19" (inches) Size Unpacked without Stand (Monitor Head Only)

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

250 x 250 (mm) (inches)

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

(mm)

9.84" x 9.84"

540.2 x 261.75 x 483.4

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

CONNECTIVITY

Video Input Signals VGA + HDMI™ + DisplayPort™ VGA, DisplayPort™, USB, Video Cables Supplied Power, HDMI[™] (for NA only) USB Hub USB 3.01 (4 x down, 1 x BC) Audio Out Yes (3.5 mm) Internal Power 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 <0.5 W Sleep-Mode Switch Off-Mode <0.3 W Power Supply Internal Power Voltage 90 VAC - 264 VAC

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

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 transferate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gen 1; 10 Gbit/s for USB 3.1 Gen 2 & 20 Gbit/s for USB 3.2.













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

3 year (includes backlight)
August 2017 Weight Limited warranty Available date VESA DDC2B/CI VESA-compliant ENERGY STAR® qualified Power management ISO 9241-307 Ergonomics Emission standards FCC Class B TCO Displays 7.0, TCO Certified Edge 2.0, WEEE, RoHS, **EPEAT™ Silver rating** Environmental Preset resolutions VGA: 640x480 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900, 1600x900 WSXGA+: 1680x1050



Presets display modes	Full HD: 1920x1080,1920x1200 HDMI: 19; DP: 11	ThinkVision T24m Wide Monitor	
Viewing adjustments Rotating screen On screen display Control features	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 power, menu, input source select and brightness		
USB hub Multimedia Multiple input Monitor connectors	USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0) Audio-out, optional sound bar supported Support HDMI, DisplayPort, USB 3.1 Type-C (1) HDMI (1.4), digital, HDCP-compliant		
Signal cables Mounting features Security	(2) DisplayPort (1.2), digital, HDCP-compliant (3) USB 3.1 Type-C (1) 1.8 meter USB Type-C to USB Type-C cable Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)		
Ship group	Monitor with stand, Safety and Warranty Information, 1.8 meter USB Type-C to USB Type-C cable, 1.8 meter black power cord		

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













ThinkVision T24V-10 MONITOR

SPECIFICATIONS

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

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

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

WARRANTY AND AVAILABILITY

Warranty ROW PRC

3 Years 18 Months WW Geography Availability





Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the dar 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 Viewable image size

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

Native resolution

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

Dot/Pixel per Inch 92 dpi

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stànd

Bezel width

Dimensions (HxWxD)

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

20 watts typical, 90 watts maximum, Power supply

<0.5 watts standby/suspend, universal,

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

July 2016 Available date

ENERGY STAR® qualified Power management

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

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

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

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

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

Rotating screen None

On screen display

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

RealSense 3D camera SR300 Camera

mealsense 3D camera SR300

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

Monitor connectors

Signal cables

Mounting features None

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

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

Micro USB 3.0 cable (for using camera)

Limited Warranty Accessories

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

tail.page?DocID=UM008281

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 July 2017

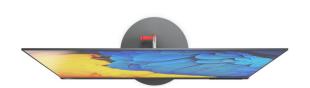












Lenovo ThinkVision X24-20

X24-20 Flat Panel Monitor Name **Features** Bezel color Raven black Widescreen 23.8-inch monitor 61BDGAR3US / 61BDGAT3EU Type-model • Supports 1920x1080 resolution Panel TFT-LCD, IPS (In-Plane Switching), • Includes dual input connection for attachment to two White LED backlight 23.8" (604.5mm) diagonal 20.75" x 11.67" (527.0mm x 296.5mm) 1920x1080 systems concurrently Viewable image size EPEAT Silver certified Max view area (W x H) • Microsoft® Windows® 7 certified Native resolution Microsoft Windows 10 certified Aspect ratio 16:9 Pixel pitch (mm) 0.2745 x 0.2745 mm Dot/Pixel per Inch 92 dpi Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical) 72% (NTSC) 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Color gamut Viewing angle at 10:1 CR Stand Tilt stànd 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 <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 Tilt: 30° back, -5° forward Viewing adjustments Rotating screen None

On screen display

On screen display with digital user controls (8 languages) Control features Direct access (buttons on side bezel) for power, dual input and brightness

USB hub None

Multiple input

(1) HDMI (1.4a), digital, **HDCP-compliant**(2) DisplayPort, digital, black, **HDCP-compliant**(1) detachable, HDMI at each end, digital, 1.8 meter None Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Monitor connectors

Signal cables

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 HDMI signal cable,

1.8 meter black power cord

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













Lenovo ThinkVision P27h

P27h Wide Flat Panel Monitor Name

Case color **Black**

61AFGAR1US / 61AFGAT1EU Type-model

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

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

Viewing angle at 10:1 CR

178° horizontal, 178° vertical Stand

Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2mm) 20.21" H x 24.08" W x 10.62" D; Bezel width **Dimensions** 513mm H x 611.6mm W x 269.8mm D

(HxWxD, including stand) Power supply

38 watts typical, 140 watts maximum (with USB),

<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 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, 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 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 upstream port, four USB 3.0 Type-A downstream ports Audio-out, optional sound bar supported

Multimedia

Camera

Viewing adjustments Rotating screen

Control features USB hub

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 ThinkVision P27q

P27q Wide Flat Panel Monitor Name

Case color Black Type-model 61A8GAT1EU

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

Brightness 350 nits or cd/m2 (typical)

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

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

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

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

Power supply

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

< 0.3 watts switch off integrated (no external brick-like power supply)

15.43 lb; 7.0kg (including stand)

Weight Limited warranty

3 year January 2017 Available date

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

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

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor

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

Support ThinkCentre Tiny

• Supports optional soundbar Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision P27q Monitor

Lenovo 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

16:3

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)

01 1.1

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 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

< 0.3W

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

Ye

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

тсо

8.0

TCO Edge 2.0

2.0

EPEAT Silver

RoHS (EU 2002/95/EC)

Yes

Windows Certification

Windows 7, Windows 10

Efficiency Standard
Tier 1

TÜV Rheinland Eye Comfort

China Energy

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

Signal cables

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

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

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

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













ThinkVision® P32u-10 **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











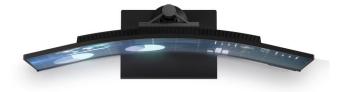












Specifications

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 FreeSync support graphic cards













ThinkVision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) x 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

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











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

(Pon/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 / 194 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 Gent; 10 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) $694 \times 163 \times 480 \text{ mm}$

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

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

< 0.3W

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

Power Consumption Sleep/Off Mode < 0.5W

Power Consumption Switch-off Mode

Energystar Power Consumption $(P_{on}/E_{\tau EC})$ 17.4W / 54.4kWh

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 Yes

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 18.9 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

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 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° / 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 / 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) $714.6 \times 426.0 \times 51.0$ 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

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)

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 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-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

Yes

TÜV Rheinland Eye Comfort

















^{*}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.

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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^{**}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.













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















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Lenovo ThinkVision X1

X1 Wide Flat Panel Monitor Name

Case color **Black**

Type-model 60E2GAR1US / 60E2GAT1US / 60E2GAT1EU

TFT-LCD, IPS (In-Plane Switching), White LED backlight 27" (684.7mm) diagonal 23.49" x 13.21" (596.7mm x 335.7mm) Panel

Viewable image size

Max view area (W x H)

3840x2160 Optimum resolution Max pixel rate 600MHz 16:9 Aspect ratio Pixel pitch (mm) 0.16 x 0.16mm Dot/Pixel per Inch 163 dpi

300 nits or cd/m2 (typical) Brightness

Contrast ratio 1300:1 (typical)

Pixel response time 6ms Color gamut 99%

Viewing angle at 10:1 CR 178° horizontal, 178° vertical Stand Tilt stand Sides: 0.088" (2.23mm) Bezel width 19.35" H x 24.19" W x 10.63" D; 491.4mm H x 614.5mm W x 270.0mm D Dimensions

(HxWxD, including stand)

Power supply

40 watts typical, 130 watts maximum (with USB),

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

14.11 lb; 6.40kg (including stand) Weight

Limited warranty4 3 year Available date March 2016

VESA DDC2B/CI VESA-compliant² Power management ENERGY STAR® 7.0 **Ergonomics** ISO 9241-307 Emission standards FCC Class B

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

ULE Gold

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

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x720, 1280x768, 1280x800, 1360x768

WXGA+: 1440x900, 1600x900

WSXGA+: 1680x1050

Full HD: 1920x1080, 1920x1200

UHD: 3840x2160

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

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

Rotating screen None

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



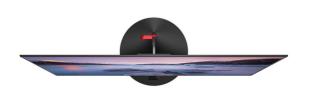






















ThinkVision X1 (2nd GEN) MONITOR

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)

ENVIRONMENTAL

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

Humidity Operating

8% - 80% 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%

POWER CONSUMPTION

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

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

SIGNAL INPUT

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

Video Cable Length

Yes (4 x USB 3.0) USB Hub

USB Cable Supplied N/A Audio-Jack

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)

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

18 m

2 Buttons + Tracking Point English, French, Italian,

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) 1.2 / 0.05"

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

24

1.2 / 0.05"

German, Spanish, Japanese, Chinese, Russian

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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