

Lenovo ThinkPad Laptops PSREF Product Specifications Reference Version 545, July 2019

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Summary of Changes

This section describes the technical changes made in this edition.

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

July 17, 2019 - Version 545

Additions in this update

► New product(s)

ThinkPad P1 (2nd Gen) announced July 2019
ThinkPad X1 Extreme (2nd Gen) announced July 2019

▶ Others

ThinkPad X395 - Ethernet corrected to Realtek RTL8153

Withdrawals in this update

► Withdrawn product(s)

None



ThinkPad 11e (5th Gen) Platform Specifications

Processor	7th General Intel Pentiu				rocessor, I	Intel C	eleron® proces	sor, or	Dimensions Weight	WxDxH: 11.81" x 8.27" x 0.86"; 300mm x 210mm x 21.9mm Starting at 2.99 lb (1.36 kg)
	Processor Number	# of Cores	# of Threads	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	2		1.0 GHz	2.6 GHz	4MB	LPDDR3-1866	Intel HD	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1 (with the function of Power
	i5-7Y54		4	1.2 GHz	3.2 GHz	4MB		Graphics 615	1 0115	Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45),
	Celeron N4100		4	1.1 GHz	2.4 GHz	4MB	DDD4 0400	Intel UHD Graphics 600]	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 N5000	4		1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD Graphics 605	Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec, stereo speakers, 2W x 2, Dolby® Audio™.
Graphics							5 in processor,	,		monaural digital microphone, combo audio/microphone jack
	supports ex supports du Max resolut	ıal inde	ependen	t display;			oe-c; 096x2160@30)Hz (HDMI)	Keyboard Touchpad	6-row, spill-resistant, multimedia Fn keys Buttonless Mylar surface touchpad below keyboard, multi-touch
Chipset Memory	Intel SoC (S 4GB or 8GE soldered to	System 3 / 186	on Chip 6MHz LI) platform PDDR3 or	2400MHz				Security Security chip vPro Fingerprint reade	Power-on password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified None
Display	Some: 11.	6" (295	mm) HI) (1366x7	68), anti-gl	are, LI	ED backlight,		NFC	None
	Some: 11.	6" (295	īmm) Hi[) (1366x7	68), anti-gl	are, LE	ntrast ratio ED backlight, II io, 170° viewin	PS, multi-touch, g angle	Battery Max battery life	Integrated Li-ion 42Wh battery MobileMark® 2014: 13.9 hr * Battery life varies significantly with settings, usage, & other factors
Multi-touch		,,			s 10-finger	gestu	re (HD IPS onl	ÿ)	AC adapter	45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter
Storage	eMMC flash M.2 SSD / F				16Gh/e				Preload	Windows® 10 Home 64 or Windows 10 Pro 64
Optane™ memor Optical		Ole IV	VIVIC, I	JIE 0.0 X Z	., 1000/3				Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
Ethernet	Realtek RT	L81110	GUS Gig	abit Netw	ork Conne	ction			Mil-Spec test	MIL-STD-810G military testing
WLAN + Bluetooth™	One of the following, configurable by model: Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card (US on								Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant
WWAN	None									



ThinkPad A275 Platform Specifications

Processor	AMD PRO A-Se	eries A	PUs							er Optional: Smart card reader			
	Processor	# of	_ # of	Base	Max Turbo	Cache	Memory	Processor	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.1 Gen 1 (USB 3.0, one Always On),			
	Number	Cores	Threads	Frequency	Frequency		Types	Graphics AMD	1 0110	USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),			
	PRO A10-8730B			2.4 GHz	3.3 GHz			Radeon™		HDMI 1.4b, Ethernet (RJ-45) * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	PRO A12-8830B	4	4	2.5 GHz	3.4 GHz	2MB	DDR4-1866	R5 Graphics	Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter			
	PRO A12-8830B			2.5 GHz	3.4 GHz		22111 1000	AMD Radeon	(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
	PRO A12-9800B			2.7 GHz	3.6 GHz			R7 Graphics	Comoro (antional	//HD720p resolution, fixed focus			
	* Windows 7 is on	ly supp	orted by I	PRO A10-87		O A12-8	830B		Audio support	HD Audio, Realtek ALC3268 codec / stereo speakers, 1.5W x 2 /			
Graphics	AMD Radeon R									dual array microphone, combo audio/microphone jack			
	supports extern				I or USB Ty	/pe-C;			Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
		supports three independent displays; Max resolution: 4096x2160@60Hz (USB Type-C); 4096x2160@30Hz (HDMI								TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Chipset	AMD SoC (Syst			` `	.,,			(Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole dTPM 1.2: discrete TPM 1.2. TCG Certified			
Memory	16GB max / 186				SO-DIMM	socket			, ,	dTPM 2.0: discrete TPM 2.0, TCG Certified			
Display	Some: 12.5" (3			1366x768), atio, 500:1			acklight,		Fingerprint reade	er Optional: Touch style match on chip fingerprint reader on the palm rest None			
	Some: 12.5" (3						backlight,	IPS,	Internal battery	Optional: Integrated Li-ion or Li-Polymer 3-cell (23Wh)			
	300 nits	, 16:9	aspect r	atio, 700:1	contrast rat	tio, 170	° viewing a	ngle	External battery	Li-ion 3-cell (23Wh) or 6-cell (48Wh)			
Multi-touch (opt)	On-cell touch, s	<u> </u>			· ,		ly)		Max battery life (<i>MobileMark</i> ® 2014)	Models No + 3-cell 3-cell + 3-cell 3-cell + 6-cell 48Wh			
Storage	System has one F Some: HDD / S	IDD slo	ot or one N	1.2 slot exclu	sively for sto	rage	rotootion C	voto m TM	(MobileMark* 2014)	Wax battery life 5.05 fil 10.1 fil 15.0 fil			
	Some: SSD/S	Sata 6	i.0Gb/s, 2	2.5" wide, 7	mm high (e	e.g. xxx	GB SSD)	ystem	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W slim tip AC adapter or 45W USB Type-C AC adapter			
Optical	Some: M.2 SS None	D / PC	ie NVM	e, PCIe 3.0	x 2, 16Gb/	S			Preload	Windows® 7 Professional 64 preinstalled <i>Some:</i> Windows 10 Home 64			
Ethernet	Realtek® RTL81	11FP	V Gigabi	t Ethernet o	connection					through downgrade rights in Some: Windows 10 Pro 64 Windows 10 Pro 64 • Lenovo Companion			
WLAN	Realtek RTL882					1.2 card				Lenovo Solution Center Lenovo Setting			
Bluetooth™	Bluetooth 4.1 w									 Lenovo PowerEngage Microsoft Office preloaded; 			
WWAN (optional)	One of the following	ng, con	figurable l	by model:						 ThinkVantage Product Recovery ThinkVantage System Update 			
, , ,	Wireless WAN	l upgra	adable							Adobe® Reader®			
	 Integrated Mol Qualcomm® S 					acc FM	17455)			Microsoft® Office preloaded;			
	* For non-WWAN	model.	it means	the model is	NOT WWAN	l upgrad	able			purchase a product key to activate • McAfee® LiveSafe™ (30-day trial)			
SIM card (opt)		Micro-SIM card slot, opt Verizon LTE (US) SIM card											
Dimensions	WxDxH: 12.03							_	Limited warranty	One of the following, configurable by model: • 1-vear depot repair service			
Weight	Models	No +		_	+ 3-cell		3 + 6-cell			3-year/1-yr battery depot repair service			
0		.79 lb /	1.27 kg	2.98 lb	/ 1.36 kg	3.33	lb / 1.52 kg			3-year/1-yr battery limited onsite service			
Case color Case material	Black Glass-Fiber Rei	nforce	d Plastic						Mil-Spec test	MIL-STD-810G military testing			
	CIGOS I IDOI ITO		a i iastic						Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			









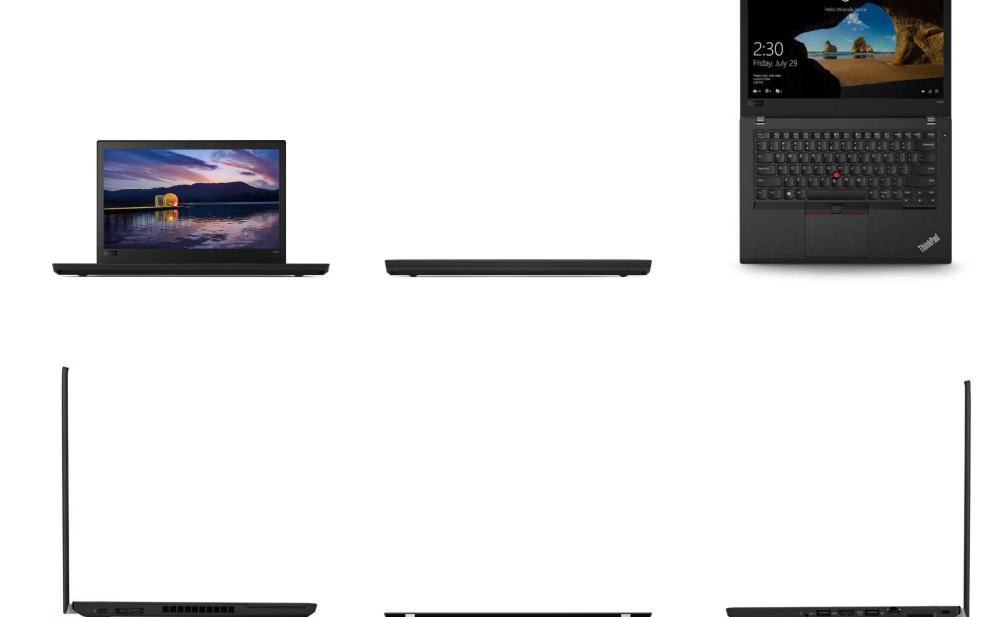
ThinkPad A285 Platform Specifications

Processor	AMD Ryzer	ı™ PRC) Mobile	Processors	s with Rade	on™ Vega	Graphics			er Optional: Smart card reader
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2,
						Radeon Vega 6 Graphics	two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and Display HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,			
	Ryzen 5 PRO 2500U	4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	2MB L2 / DDR4-2400 Radeon Vega			headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole
	Ryzen 7 PRO 2700U		8	2.2 GHz	3.8 GHz			Radeon Vega 10 Graphics	Monitor cable	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Graphics	AMD Raded supports ex	ternal	digital me	onitor via F	a 10 Graph HDMI or US	ics in prod B Type-C	cessor only;		(optional) Bundled Accy	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
	supports for Max resolut				JSB Type-C	C); 4096x	2160@60H:	z (HDMI)	Camera (optional	I) One of the following, configurable by model:
Chipset Memory	AMD SoC (8GB or 16G					temboard	, no sockets	6	Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec /
Display		nits, 1	16:9 aśpe	ect ratio, 40	0:1 contras	st ratio	•			stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Multi-touch (opt)	Some: 12.5 300 On-cell touc	nits, 1	16:9 aśpe	ct ràtio, 80	0:1 contras	st ratio, 17	D backlight 0° viewing a	, IPS, angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	One of the fo	llowing,	, configura	ble by mode		31 li y)			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
-	M.2 SSD /M.2 SSD /				4 32Gh/e				System Mgt	DASH Management
Optical	None	7 1 010	TV IVIC, I	OIC 0.0 X	+, 02Gb/3				Fingerprint reade NFC	er Optional: Touch style match on chip fingerprint reader on the palm rest
Ethernet	Gigabit Ethe via bundled				ernet Exten	sion Adap	oter Gen 2		Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
WLAN Bluetooth™	Realtek® R1 Bluetooth 4								Max battery life	MobileMark® 2014: 10.55 hr * Battery life varies significantly with settings, usage, & other factors
WWAN (optional)	Integrated N	Mobile	Broadba	nd 4G LTE	-A,				AC adapter Preload	45W or 65W USB Type-C AC adapter Windows® 10 Home 64 or Windows 10 Pro 64
	Intel XMM™ * For non-W	' 7360 VAN m	(Fibocon odel, it me	າ L850-GL) ans the mod), M.2 card <i>lel is NOT W</i>	WAN upgra	dable		Limited warranty	One of the following, configurable by model:
SIM card (opt)	Nano-SIM o optional Ver	card sl	ot, in the	combo slo	t with micro	SD card i	eader,			 1-year depot repair service 3-year/1-yr battery depot repair service
Dimensions	WxDxH (HL 12.				mm x 209.8	3mm x 17.	4mm		Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing
	WxDxH (FF	ID nor	n-touch):		mm x 209.8				Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Weight	FHD non-tou HD non-tou	ouch m och mo	odel: 2. del: 2.	49 lb / 1.13 78 lb / 1.26	3 kg; 3 kg;	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Omm			
Case color	FHD multi-t Black	ouch r	nodel: 2.	79 lb / 1.27	' kg					
Case material	Display cov	Р	PS (HD 8	ֆ FHD muli	ti-touch mo					
Note: The specifica	Bottom:			n/Aluminur						Lenovo



ThinkPad A475 Platform Specifications

Processor	AMD PRO A-Se	eries A	PUs							er Optional: Smart card reader			
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	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), USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort).			
	PRO A10-8730B			2.4 GHz	3.3 GHz			AMD Radeon™ R5 Graphics	Monitor cable	HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo USB-C to VGA Adapter			
	PRO A12-8830B PRO A10-9700B PRO A12-9800B	4	4	2.5 GHz 2.5 GHz 2.7 GHz	3.4 GHz 3.4 GHz 3.6 GHz	2MB		AMD Radeon R7 Graphics		()HD720p resolution, fixed focus HD Audio, Realtek ALC3268 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack			
	* Windows 7 is or	nly supp	orted by	PRO A10-87	30B and PR	O A12-88	830B		Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
	AMD Radeon F supports extern supports three i Max resolution:	al digit indepe	al monit ndent di	or via HDM splays;	I or USB Ty	•	160@30Hz	(HDMI)	UltraNav™ Security Security chip	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole dTPM 1.2: discrete TPM 1.2, TCG Certified dTPM 2.0: discrete TPM 2.0. TCG Certified			
Chipset Memory	AMD SoC (Syst 32GB max / 186				el capable	two DI	DR4 SO-DI	MM sockets	Fingerprint reade NFC				
Display	Some: 14.0" (3 250 nits	s, 16:9 855mm s, 16:9	aspect r) FHD (1 aspect r	atio, 350:1 920x1080) atio, 700:1	contrast ra , anti-glare contrast ra	tio , LED b tio, 170°	acklight, IF viewing a	PS, ngle	Internal battery External battery Max battery life (MobileMark® 2014)	Optional: Integrated Li-Polymer 3-cell (24Wh) Li-Polymer 3-cell (24Wh) or Li-ion 6-cell (48Wh) Models 3-cell 3 + 3-cell 6-cell 48Wh 3 + 6-cell 48Wh Max battery life 5.13 hr 10.26 hr 10.26 hr 15.4 hr			
Multi-touch (opt) Storage	On-cell touch, s			, ,	,		• /		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter, 45W or 65W USB Type-C AC adapter			
Optical	Some: HDD / Some: SSD / S Some: M.2 SS None	SATA 6	.0Gb/s, 2	2.5" wide, 7	'mm hiğh (e	e.g. xxx		ystem™	Preload	Windows® 7 Professional 64 preinstalled Some: Windows 10 Home 64 through downgrade rights in Some: Windows 10 Pro 64 Lenovo Companion Lenovo Solution Center Lenovo Setting			
Ethernet	Realtek® RTL81	111EP	V Gigabi	t Ethernet	connection					 Lenovo PowerEngage Microsoft Office preloaded; 			
WLAN Bluetooth™	Realtek RTL882 Bluetooth 4.1 w									 ThinkVantage Product Recovery ThinkVantage System Update Adobe® Reader® 			
WWAN (optional)	One of the following Wireless WAN Integrated Mo Outplease Representation Outplease Representat	l upgra	adable oadband	d 4G LTE-A		- N	17455)			 Microsoft® Office preloaded; purchase a product key to activate McAfee® LiveSafe™ (30-day trial) 			
SIM card (opt)	Qualcomm® S * For non-WWAN Micro-SIM card	model,	it means	the model is	NOT WWAN	ess Eivi I upgrada	able		Limited warranty	One of the following, configurable by model: 1-year depot repair service			
Dimensions		<i>VxDxH</i> : 13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm								3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service			
Weight										MIL-STD-810G military testing			
	Magnesium PPS		.49 lb / 1.9 .63 lb / 1.0		3.92 lb / 4.35 lb /		$\overline{}$		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			
Case color Case material	Black Display cover:	Magne	esium Hy		S (Magnesi		orid for US	only);					
Dimensions Weight	MxDxH: 13.2 Models Magnesium PPS Black Display cover: Bottom:	25" x 9. 3-6 3. 3. Magne	.15" x 0. cell or 3 + .49 lb / 1. .63 lb / 1. esium Hy Fiber Re	79"; 336.6 3-cell 58 kg 65 kg /brid or PPS binforced P	6mm x 232. 6-cell or 3 3.92 lb / 4.35 lb / 6 (Magnesiastic	+ <i>6-cell</i> 1.78 kg 1.85 kg		only);	Mil-Spec test Environment	3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service MIL-STD-810G military testing			



ThinkPad A485 Platform Specifications

Processor	AMD Ryzer	n™ PRC) Mobile I	Processors	s with Rade	on™ Vega	Graphics			r Optional: Smart card reader				
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I One USB 3.1 Gen 1 (Always On), one USB 3.1 Gen 2,				
	Ryzen 3 PRO 2300U	00.00	4	2.0 GHz	3.4 GHz		Туроо	Radeon Vega 6 Graphics		two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader,				
	Ryzen 5 PRO 2500U	4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics	4-in-1 media reader (MMC, SD, SDHC, SDXC), side docking connector security keyhole					
	Ryzen 7 PRO 2700U		8	2.2 GHz	3.8 GHz			Radeon Vega 10 Graphics	Monitor cable <i>(opt</i>	* Depending on many factors, actual data transfer speed may be lower than theoretical speed) HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter				
Graphics	AMD Rades	ternal	digital me	onitor via F	a 10 Graph HDMI or US	ics in prod B Type-C	essor only;		USB-C to DP: Lenovo USB-C to DisplayPort Adapter Bundled Accy None Camera (optional) One of the following, configurable by model:					
	supports fo Max resolut				JSB Type-C	C); 4096x	2160@60H	z (HDMI)	Camera (optional)	HD720p camera with ThinkShutter camera privacy, fixed focus				
Chipset Memory	AMD SoC (32GB max * Installed DI	/ 2400	MHz DDİ	R4, dual-ch	nannel capa			IMM sockets	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /				
Display	Some: 14.0 220 Some: 14.0) nits, 1	l6:9 aspe	ct ratio, 40	0:1 contras	t ratio	•	PS.	 Keyboard UltraNav™	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad				
Multi-touch (opt)	On-cell tou) nits, 1 ch, sup	16:9 aspe ports 10-	ct ratio, 70 finger ges	0:1 contras ture (FHD o	st ratio, 17 only)	0° viewing a		Security Security chip System Mgt	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified DASH Management				
Storage	System has a Some: HD Some: SS	D/SA	TA 6.0Gb	/s, 2.5" wid	de, 7mm hi	gh, Active		System™	Fingerprint reader <i>Optional:</i> Touch style match on chip fingerprint reader on the keyboa NFC None					
	Some: M.2 Some: 128	2 SSD 3GB M	/ PCIe N' .2 SSD /	VMe, PCIe PCIe NVM	3.0 x 4 le, PCle 3.0) x 2,			Battery	Integrated Li-ion 24Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery				
Optical	in v * <i>Installed M.</i> None	VVVAN 2 SSD	siot as 2 is PCle 3.0	nd Storage 0 x 4 but run	e, mutually at PCle 3.0	exclusive x 2 due to	with WWAN M.2 SSD ada	l pter limitation	Max battery life (MobileMark® 2014)	Max battery life 5.57 ftf 10.76 ftf 10.76 ftf 10.76 ftf 22.15 ftf				
Ethernet	Realtek® R	TL811	1GUL Gig	gabit Ether	net connec	tion			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter				
WLAN Bluetooth™	Realtek RT								Preload	Windows® 10 Home 64 or Windows 10 Pro 64				
WWAN (optional)	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable								- Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service				
SIM card (opt) Dimensions	Nano-SIM o				, ,		v 10 05mm		Mil-Spec test	MIL-STD-810G military testing				
Weight	Models Magnesium PPS	odels 24Wh or 24Wh + 24Wh 48Wh, 72Wh, or 24Wh + 48Wh / 72Wh agnesium 3.49 lb / 1.58 kg 3.92 lb / 1.78 kg							Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant				
Case color Case material	Black Display cov Bottom:		agnesium			4.00 10 /	1.03 kg							
Note: The specific	ations above	mov no	t be eveile	علام ما ما	aiono				•	Lenovo				









ThinkPad E480 Platform Specifications

Processor	7th Generation In				or			Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm
	Processor # of Number Cores	# of Base Max Turbo Threads Frequency Frequency Cache Types Graphics						Weight Case color Case material	Starting at 3.87 lb / 1.75kg Black or silver Display cover: Aluminum or PC/ABS plastic:
	i3-7020U i3-7130U 2	4	2.3 GHz 2.7 GHz	-	3MB 3MB	DDR4-2133	Intel HD Graphics 620	Smart card reade	Bottom: PC/ABS plastic
	i5-7200U		2.5 GHz	3.1 GHz	3MB		020	Media reader	MicroSD card reader
	8th Generation In	ntel Core		Max Turbo	1	Mamani	Drosser	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),
	Processor # of Number Cores	-	Base Frequency	Frequency	Cache	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack,
	i3-8130U 2 i5-8250U 4	4	2.2 GHz 1.6 GHz	3.4 GHz 3.4 GHz	4MB 6MB	DDR4-2400	Intel UHD Graphics		microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i7-8550U 4	8	1.8 GHz	4.0 GHz	8MB		620	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec /
Graphics	Intel HD Graphic Intel HD Graphic	s 620 or	Intel UHD	Graphics 6	20 in p	rocessor on rocessor an	ly or d		stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	AMD Radeon RX supports externa supports dual inc	ıl digital r	nonitor via			e-C;		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
	Max resolution:	1920x10	80 (HDMI)	@60Hz				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 (Syster 32GB max / 2400 * System clocks	OMHz DI	ÒŔ4, dual-c	hannel cap			O-DIMM sockets	vPro	None None Touch style fingerprint reader on the palm rest None
Display	Some: 14.0" (35 220 nits, Some: 14.0" (35	16:9 asp	oect ratio, 4	00:1 contra	ast ratio)		Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter <i>MobileMark</i> ® 2014: 13.51 hr
Multi-touch			pect ratio, 4				,,	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Storage	Up to 2 drives (one Some: HDD / Some				abla	aradabla		Preload (optional) Windows® 10 Home 64 or Windows 10 Pro 64
	Active Pr			ide, remova	abie, up	ogradable,		Limited warranty	1-year depot repair service
Ontana™ mamar	Some: M.2 SSD y Optional: Intel O			0 NIV/M0 B) v 0		Mil-Spec test	MIL-STD-810G military testing
Optical	None	piane m	emory, POI	CINVIVIC, F	OIE 3.0	, , _		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Ethernet	Gigabit Ethernet	Connect	tion, Realte	k R8111GI	JS]	
WLAN + Bluetooth™	One of the following Realtek® RTL8 Realtek RTL88 Intel Dual Band Intel 3165ac ca	821CE, V 22BE, W d Wireles	Wi-Fi 1x1 8 ∕i-Fi 2x2 80 s-AC 3165	02.11ac + I 2.11ac + B . 1x1, Wi-Fi	luetootl i + Blue	n 4.1, M.2 c tooth 4.1, M	ard 1.2 Card		
WWAN SIM card	None None								Lonove



ThinkPad E485 Platform Specifications

Processor	AMD Ryze	en™ Mo	bile Pro	cessors wit	th Radeon	™ Vega G	raphics		Dimensions	Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm
			# of Threads		Max Turbo Frequency	Cache	Memory Controller	Processor Graphics	Weight	PC/ABS (WxDxH): 12.96" x 9.53" x 0.86"; 329mm x 242mm x 21.9mm Starting at 3.87 lb / 1.75kg
	Ryzen 3 2200U	2	4	2.5 GHz	3.4 GHz	1MB L2 / 4MB L3		Radeon Vega 3 Graphics	Case color Case material	Black Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic
	Ryzen 5 2500U 2.0 GHz 3.6 GHz 2MB L2 / 4MB L3 DDR4-2400 Radeon Vega 8 Graphics			Smart card reade	rNone					
	Ryzen 7 2700U	4	8	2.2 GHz	3.8 GHz	2MB L2 / 4MB L3		Radeon 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 2 (with the function of Power Delivery and DisplayPort),
Graphics	supports e supports d	externa dual in	al digital depende	monitor via ent display;	HDMI or I	Graphics USB Type	in processo e-C;	r;		HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Chipset Memory	AMD SoC 32GB max	(Syste c / 240	em on C 0MHz D		m channel ca	<u> </u>)-DIMM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
Display	22	20 nits,	, 16:9 as	HD (1366x7 spect ratio, 4 FHD (1920x	400:1 cont	rast ratio	backlight, ED backligh	t, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	None 25	i0 nits,	16:9 as	spect ratio, 4	400:1 cont	rast ratio			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	Some: HD	DD`/ S	ATA 6.0	<i>D and one HI</i> Gb/s, 2.5" w		vable, up	gradable,		Fingerprint reader	rNone None
Optical	Some: M. None			System™ NVMe					Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Ethernet		hernet	Connec	ction, Realte	ek RTL811	1GUS			Max battery life	MobileMark® 2014: 9.37 hr * Battery life varies significantly with settings, usage, & other factors
WLAN +				urable by mod					AC adapter	45W or 65W USB Type-C AC adapter
Bluetooth™							th 4.1, M.2			Windows® 10 Home 64 or Windows 10 Pro 64
	 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 								Limited warranty Mil-Spec test	1-year depot repair service
WWAN	None	<u> </u>								None
SIM card	None								Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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



(intel)





















ThinkPad E490 Platform Specifications

Processor	8th Generation	Intel® Co	re™ i3 / i5 / i	7 Processo	or				Dimensions Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm				
	Processor # of Number Core		Base Frequency	Max Turbo Frequency	Cache	Memory Types		Processor Graphics	Weight Case color	PC/ABS (WxDxH): 12.96" x 9.53" x 0.83"; 329mm x 242mm x 21.9mm Starting at 3.87 lb / 1.75 kg Black or silver			
	i3-8145U 2 i5-8265U 4	8	2.1 GHz 1.6 GHz	3.9 GHz 3.9 GHz	4MB 6MB 8MB	DDR4-240	00 Intel	UHD Graphics 620	Case material	Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic			
	i7-8565U		1.8 GHz	4.6 GHz	SMB				Smart card readerNone				
Graphics	Intel UHD Grap Intel UHD Grap AMD Radeon F supports extern supports dual in Max resolution:	hics 620 RX 550X (nal digital ndepende	in processor Graphics, 20 monitor via ent display:	r and 3B DDR5 n HDMI or U	SB Typ	e-C;	24Hz	(HDMI)	Media reader Ports	MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None			
Chipset	Intel SoC (Syst	em on Cl	nip) platform						Monitor cable Bundled Accv	None			
Memory	32GB max / 24 * Installed memor	00MHz D ry is actual	DR4, dual-c <i>ly 2666MHz b</i>	hannel cap ut run at 240	able, tv 00MHz c	wo DDR4 due to Intel	SO-DII limitatio	MM sockets	Camera	HD720p camera, fixed focus			
Display	Size / Resolution		- 1	Brightness	Ratio		Angle	Multi-touch	Audio support	HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack			
	14.0" HD (1366x		nti-glare TN	220 nits	16:9	400:1	90°	Non-touch	Keyboard	6-row, spill-resistant, multimedia Fn keys, optional LED backlight			
	14.0" FHD (1920	x1080) Ar	nti-glare IPS	250 nits	16:9	600:1	170°	Non-touch	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Multi-touch	None								Security	Power-on password, hard disk password, supervisor password, security key			
Storage	Up to two drives (HDD / SATA (6.0Gb/s, 2	2.5" wide, 7n	<i>HDD)</i> nm high, A	ctive Pr	otection S	System™	гм	Security chip	Integrated model: discrete TPM 2.0, TCG Certified firmware TPM 2.0 integrated in chipset			
	M.2 2280 SSM.2 2280 SSM.2 2242 SS	D / SATA D / PCle D / PCle	6.0Gb/s NVMe, PCIe NVMe, PCIe	3.0 x 2 3.0 x 2					System Mgt Fingerprint reader NFC	None r Optional: Touch style fingerprint reader on the palm rest None			
Optane™ memory Optical	<i>Optional:</i> Intel None	Optane n	nemory, PCI	e NVMe, P	Cle 3.0) x 2			Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter			
Ethernet	Gigabit Etherne	et Connec	ction, Realte	k R8111Gl	JS				Max battery life	MobileMark® 2014: 13 hr			
WLAN + Bluetooth™	One of the follo				Sluetoo	th 4.2 M:	2 card		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
	Intel Wireless							i	Preload (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.

















ThinkPad E490s Platform Specifications

Processor	8th Genera	ation Ir	ntel® Cor	e™ i5 / i7 P	rocessor					Dimensions							
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	/	Processor Graphics	Weight Case color Case material	Starting at 3.68 lb / 1.67 kg Black or silver Aluminum						
	i5-8265U i7-8565U	4	8	1.6 GHz 1.8 GHz	3.9 GHz 4.5 GHz	6MB 8MB	DDR4-24	00 Intel	UHD Graphics 620	Smart card reade	rNone						
Graphics	Intel UHD (Intel UHD (AMD Rade supports ex supports th	Graphi on RX xterna rree in	ics 620 i (540X G I digital r depende	n processor Fraphics, 20 Monitor via Pnt display;	r and 3B DDR5 n HDMI or U	SB Typ	e-C;	@04U	(LIDAN)	Media reader Ports MicroSD card reader One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and Displayone Individual of the Function of Power Delivery Individual of The Fun							
Chipset Memory	Max resolu Intel SoC (32GB max * Installed m	Syster / 2400	m on Chi DMHz DI	p) platform	hannel cap	able, t	wo DDR4	SO-DI	MM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack						
Display	Size / Resol	lution	Su	ırface Type	Brightness	Aspect Ratio	Contrast Ratio	Viewing Angle	Multi-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad						
	14.0" FHD (14.0" FHD (220 nits 250 nits	16:9 16:9	400:1 600:1	90° 170°	Non-touch Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Integrated model: discrete TPM 2.0, TCG Certified						
Multi-touch	None									Svstem Mat	Discrete model: firmware TPM 2.0 integrated in chipset None						
Storage	One of the fo	SSD	/ SATA 6	6.0Gb/s							er Touch style fingerprint reader on the palm rest None						
Optane™ memor Optical	 M.2 2242 Y None None 	SSD	/ PCIe N	IVMe, PCIe	3.0 x 2					Battery Max battery life	Integrated Li-ion 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr with 65W USB Type-C AC adapter MobileMark® 2014: 11.5 hr						
Ethernet	Gigabit Eth	Sigabit Ethernet Connection, Realtek R8111GUS								,	* Battery life varies significantly with settings, usage, & other factors						
WLAN + Bluetooth™	One of the fo					Sluetoo	th 4.2 M	2 card		AC adapter Preload <i>(optional)</i>	45W or 65W USB Type-C AC adapter // Windows® 10 Home 64 or Windows 10 Pro 64						
2.20.0001	Intel Wire	eless-A	C 9260,	Wi-Fi 2x2 8	302.11ac +	Blueto	oth 5.0, N	1.2 card	d	I————	<u></u>						
WWAN	None									Mil-Spec test	MIL-STD-810G military testing						
SIM card	None									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant						













ThinkPad E495 Platform Specifications

Processor	AMD Ryz	en™ Mo	obile Pro	ocessors w	ith Radeon	™ Vega G	raphics		Dimensions Aluminum (WxDxH): 12.96" x 9.53" x 0.78"; 329mm x 242mm x 19.9mm		
	Processor Number		# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Controller	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	
	Ryzen 3 3200U	2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3	_	Radeon Vega 3 Graphics	Case color Case material	Black Display cover: Aluminum or PC/ABS plastic; Bottom: PC/ABS plastic	
	Ryzen 5 3500U			2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-240	Radeon Vega 8 Graphics	Smart card reade	erNone	
	Ryzen 7 3700U	4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeon 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	supports of supports of Max resol	externa dual in ution:	al digital depend 3840x2	l monitor vi ent display	z (USB Type	USB Typ	e-C;	sor; 30Hz (HDMI)	Monitor cable Bundled Accy	HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed None None	
Memory	32GB ma	x / 240	OMHz [DR4, dual	-channel ca but run at 2			O-DIMM sockets	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 1.5W x 2, Dolby® Advanced Audio /	
Display	Size / Reso	olution	5	Surface Ty	e Brightnes	Aspect Ratio	Contrast Vi	ewing Ingle Multi-touch		dual array microphone, headphone / microphone combo jack	
	14.0" HD (nti-glare T		16:9	400:1	90° Non-touch	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad	
Multi-touch	14.0" FHD None	(1920x	(1080) A	nti-glare IP	S 250 nits	16:9	600:1	170° Non-touch	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified	
Storage	• HDD / S	ATA 6	.0Gb/s,		7mm high, .			stem™	Fingerprint reade NFC	er None None	
Optical	• M.2 224 None	2 SSL) / PCIe	NVIVIE, PO	le 3.0 x 2 c	r PCIe 3	.0 X 4		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter	
Ethernet	Gigabit Et	therne	t Conne	ction, Real	tek R81110	SUS			Max battery life	MobileMark® 2014: 11 hr	
WLAN + Bluetooth™			٠,	<i>nfigurable i</i> Wi-Fi 2x2	<i>by model:</i> 802.11ac +	Bluetoot	th 4.2. M.2	card	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter	
					802.11ac					/) Windows® 10 Home 64 or Windows 10 Pro 64	
WWAN	None								Limited warranty	• • • •	
SIM card	None								Mil-Spec test	None	
Note: The appeil									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant	

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











ThinkPad E580 Platform Specifications

Processor	7th Gener	ation Ir	ntel® Cor	e™ i3 / i5 P	rocessor o	r			WLAN +	One of the following, configurable by model:		
	Processor Number	# of	# of	Base Frequency	Max Turbo	Cache	Memory	Processor	Bluetooth™	 Realtek® RTL8821CE, Wi-Fi 1x1 802.11ac + Bluetooth 4.1, M.2 card Realtek RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card 		
	i3-7020U	Cores	Tilleaus	2.3 GHz	- requency	3MB	Types	Graphics	-	Intel Dual Band Wireless-AC 3165, 1x1, Wi-Fi + Bluetooth 4.1, M.2 Card		
	i3-7130U	2	4	2.7 GHz	-		DDR4-2133	Intel HD Graphics	WWAN	* Intel 3165ac card supports BT4.2 but is limited to BT4.1 by Windows ÓS		
	i5-7200U			2.5 GHz	3.1 GHz	змв		620	SIM card	None None		
	8th Generation Intel Core i3 / i5 / i7 Processor								Dimensions	WxDxH: 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.95mm		
	Processor Number		Max Turbo Frequency	Cache	Memory Types		Weight Case color	Starting at 4.7 lb / 2.1kg Black or silver				
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB		Intel UHD Graphics	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic		
	i5-8250U i7-8550U	4	8	1.6 GHz 1.8 GHz	3.4 GHz 4.0 GHz	6MB 8MB	DDR4-2400	620	Smart card reade	· · · · · · · · · · · · · · · · · · ·		
		is NOT	 availahle i			OIVID			Media reader	MicroSD card reader		
Graphics	* i3-7130U is NOT available in US and EMEA Intel HD Graphics 620 or Intel UHD Graphics 620 in processor only or Intel HD Graphics 620 or Intel UHD Graphics 620 in processor and AMD Radeon RX 550 Graphics, 2GB DDR5 memory; supports external digital monitor via HDMI or USB Type-C;								Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	supports dual independent display; Max resolution: 1920x1080 (HDMI)@60Hz									HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec /		
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									stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
Display	Some: 15	5.6" (39	96mm) H	D (1366x76	68), 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		
Made Assarts	220 nits, 16:9 aspect ratio, 400:1 contrast ratio Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 600:1 contrast ratio								Security Power-on password, hard disk password, supervisor password, security keyho Security chip (opt)Firmware TPM 2.0 integrated in chipset or discrete TPM 2.0 TCG Certified vPro None			
Multi-touch	None	/	M 0 00D		10)				Fingerprint reader	r Optional: Touch style fingerprint reader on the palm rest		
Storage	Some: HI	<i>res (one</i> DD / S <i>i</i>	<i>м.2 SSD</i> 4TA 6.0G	and one HD b/s, 2.5" w	יט <i>ו</i> ide, remova	able, ur	ogradable,		NFČ '	None		
	Ad	ctive Pr	otection S	System™	,	, .,	3 ,		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter		
Optane™ memory Optical	Some: M.2 SSD / PCIe NVMe emory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 None									MobileMark® 2014: 12.23 hr *Battery life varies significantly with settings, usage, & other factors		
Ethernet		hornot	Connoct	ion Doolto	k D0111CI	IC			AC adapter	45W or 65W USB Type-C AC adapter		
Luieillet	ernet Gigabit Ethernet Connection, Realtek R8111GUS								Preload (optional) Windows® 10 Home 64 or Windows 10 Pro 64			
										1-year depot repair service		
									Mil-Spec test	MIL-STD-810G military testing		
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		

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



ThinkPad E585 Platform Specifications

Processor	AMD Ryzen™ N	obile Pro	ocessors wi	th Radeon	™ Vega Gı	aphics		Dimensions	Weight Starting at 4.7 lb / 2.1kg		
	Processor # of Number Core		Base Frequency	Max Turbo Frequency	Cache	Memory Controller	Processor Graphics	Weight Case color			
	Ryzen 3 2200U 2	4	2.5 GHz	3.4 GHz	1MB L2 / 4MB L3		Radeon Vega 3 Graphics				
	Ryzen 5 2500U 4	8	2.0 GHz	3.6 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics	Smart card reader Media reader	MicroSD card reader		
	Ryzen 7 4 2700U	0	2.2 GHz	3.8 GHz	2MB L2 / 4MB L3		Radeon RX Vega 10 Graphics	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort),		
Graphics	AMD Radeon \ supports extern	naľ digital	monitor via	X Vega 10 a HDMI or l	Graphics USB Type	in processo -C;	or only;		HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed		
	supports dual i Max resolution			@60Hz				Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11852 codec /		
Chipset Memory	AMD SoC (Sys 32GB max / 24				apable, tw	o DDR4 SC	D-DIMM sockets		stereo speakers, 1.5W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
Display	Some: 15.6" (220 nit	396mm) s, 16:9 a	HD (1366x7	768), anti-g 400:1 cont	lare, LEC	backlight, (NOT availa	able in EMEA)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad		
	Some: 15.6" (250 nit	396mm)	FHD (1920) spect ratio,	k1080), ant	ti-glare, L	ÈD backligh	it, IPS,	Security Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified			
Multi-touch Storage	None Up to 2 drives (or	ne M.2 SS	D and one H	DD)				Fingerprint reader	rNone None		
		Protection	n System™	vide, remo	vable, upç	gradable,		Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter		
Optical	Some: M.2 SS None	SD / PCIe	NVMe					Max battery life	MobileMark® 2014: 8.63 hr *Battery life varies significantly with settings, usage, & other factors		
Ethernet	Gigabit Ethern	et Conne	ction, Realt	ek RTL811	1GUS			AC adapter	45W or 65W USB Type-C AC adapter		
WLAN +	One of the follow	ing, config	urable by mo	del:				Preload (optional) Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™									1-year depot repair service		
	 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 							Mil-Spec test	None		
WWAN SIM card	None None							Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant		

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

























ThinkPad E590 Platform Specifications

8th Generation Inte	el® Core	e™ i3 / i5 /	7 Processo	or				Dimensions	<i>WxDxH</i> : 14.53" x 9.94" x 0.78"; 369mm x 252.5mm x 19.9mm		
	# of hreads	Base Frequency	Max Turbo Frequency	Cache	Memory Types			Case color	Starting at 4.68 lb / 2.12 kg Black or silver Display cover: Aluminum;		
i3-8145U 2	4	2.1 GHz	3.9 GHz	4MB		Intel	LIHD Graphics		Bottom: PC/ABS plastic		
i5-8265U i7-8565U 4	8	1.6 GHz 1.8 GHz	3.9 GHz 4.6 GHz	6MB 8MB	DDR4-240	0 1110	620	Smart card reade			
Intel UHD Graphics AMD Radeon RX 5 supports external d supports dual indep Max resolution: 40	es 620 in processor and 550X Graphics, 2GB DDR5 memory; digital monitor via HDMI or USB Type-C; ependent display:							Ports Monitor cable	one USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort HDMI 1.4b, Ethernet (RJ-45), headphone / microphone combo jack, microSD card reader, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical spe None None		
Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation								Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio /		
Size / Resolution	Su	rface Type	Brightness				Multi-touch		dual array microphone, headphone / microphone combo jack		
			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		
	80) Anti	i-glare IPS	250 nits	16:9	600:1	170°	Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole		
	M 2 SS	SD and one H	HDD)					Security chip	Integrated model: discrete TPM 2.0, TCG Certified Discrete model: firmware TPM 2.0 integrated in chipset		
 HDD / SATA 6.0G M.2 2280 SSD / S M.2 2280 SSD / I 	Sb/s, 2. SATA 6 PCIe N	5" wide, 7n 3.0Gb/s IVMe. PCIe	nm high, Ao : 3.0 x 2	ctive Pr	otection S	ystem™	М	System Mgt None Fingerprint reader <i>Optional:</i> Touch style fingerprint reader on the palm rest			
				Cle 3.0	x 2			Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 11 hr		
								,	* Battery life varies significantly with settings, usage, & other factors		
One of the following, configurable by model:								AC adapter 45W or 65W USB Type-C AC adapter			
							_	Preload (optional) Windows® 10 Home 64 or Windows 10 Pro 64			
<u> </u>								Limited warranty	1-year depot repair service		
								Mil-Spec test	MIL-STD-810G military testing		
INOILE								Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		
	Processor # of Number Cores T i3-8145U 2 i5-8265U i7-8565U 4 Intel UHD Graphic: Intel UHD Graphic: AMD Radeon RX 5 supports external cupports dual inde Max resolution: 40 Intel SoC (System 32GB max / 2400N * Installed memory is Size / Resolution 15.6" HD (1366x768) 15.6" FHD (1920x10) None Up to two drives (one + HDD / SATA 6.00 M.2 2280 SSD / M.2 2280 SSD / M.2 2242 SSD / y Optional: Intel Opt None Gigabit Ethernet C One of the following, • Realtek® RTL882	Processor # of Number Cores Threads i3-8145U 2 4 i5-8265U 4 8 Intel UHD Graphics 620 in Intel UHD Graphics 620 in AMD Radeon RX 550X G supports external digital resupports dual independer Max resolution: 4096x230 Intel SoC (System on Chi 32GB max / 2400MHz DE* Installed memory is actually for Installed memory is actually Size / Resolution Supports Golden Supports 4000MHz DE* Installed memory is actually Size / Resolution Supports Golden Sup	Processor Number Cores Threads Frequency i3-8145U 2 4 2.1 GHz i5-8265U 4 8 1.6 GHz 1.8 GHz I7-8565U 5 1.	Processor # of # of Base Frequency Frequency i3-8145U 2 4 2.1 GHz 3.9 GHz i5-8265U 4 8 1.6 GHz 3.9 GHz i7-8565U 5 1.8 GHz 4.6 GHz INTELLED Graphics 620 in processor only or Intel UHD Graphics 620 in processor and AMD Radeon RX 550X Graphics, 2GB DDR5 in supports external digital monitor via HDMI or U supports dual independent display; Max resolution: 4096x2304@60Hz (USB Type-Intel SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel cap * Installed memory is actually 2666MHz but run at 240 intelled memor	Number Cores Threads Frequency Frequency Cache I3-8145U 2 4 2.1 GHz 3.9 GHz 4MB I-8 GHz 3.9 GHz 4MB I-8 GHz 3.9 GHz 6MB I-8 GHz 4.6 GHz 8MB I-8 GHz 1.8 GHz	Processor # of Number Cores Threads Frequency Frequency Frequency Types i3-8145U 2 4 2.1 GHz 3.9 GHz 4MB i5-8265U 4 8 1.6 GHz 3.9 GHz 6MB DDR4-240 i7-8565U 4 8 1.6 GHz 3.9 GHz 6MB DDR4-240 i7-8565U 4 8 1.6 GHz 3.9 GHz 6MB DDR4-240 i7-8565U 4 8 1.6 GHz 3.9 GHz 6MB DDR4-240 i7-8565U 4 8 1.6 GHz 8MB DDR4-240 i7-8565U 4	Processor # of Number Frequency Frequency Cache Memory Types Intel Intel	Processor Number Cores Threads Frequency Frequency Frequency Frequency Types Graphics 3-8145U 2	Processor # of # of Base Max Turbo Frequency Types Types Types Types Cache Memory Types Types Cache Cache Types Types Types Cache Types Types Types Cache Types Ty		

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













ThinkPad E595 Platform Specifications

Processor	AMD Ryzen™ Mo	obile Pro	ocessors wit	h Radeon	[™] Vega G	raphics		Dimensions	<i>WxDxH:</i> 14.53" x 9.92" x 0.78"; 369mm x 252mm x 19.9mm		
	Processor # of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Controller	Processor Graphics	Weight Case color	Starting at 4.7 lb / 2.1kg Black		
	Ryzen 3 3200U 2	4	2.6 GHz	3.5 GHz	1MB L2 / 4MB L3		Radeon Vega 3 Graphics	Case material	Display cover: Aluminum; Bottom: PC/ABS plastic		
	Ryzen 5 3500U 4	8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3	DDR4-2400	Radeon Vega 8 Graphics	Smart card reade Media reader	MicroSD card reader		
	Ryzen 7 4 3700U	°	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3		Radeon RX Vega 10 Graphics	Ports	One USB 2.0, two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),		
Graphics	AMD Radeon Ve supports externa supports dual in Max resolution:	aľ digita Idepend	l monitor via ent display;	HDMI or	JSB Type	e-C;	·	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 (Syst 32GB max / 240 * Installed memory	OMHz [DDŔ4, dual-	channel ca	apable, tw 400MHz d	vo DDR4 S0 ue to AMD lin	D-DIMM sockets nitation	Camera Audio support	HD720p camera, fixed focus HD Audio, Synaptic® CX11880 codec / stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack		
Display	Size / Resolution Surface Type Brightness Aspect Contrast Viewing Ratio Ratio Angle Multi-touch						 Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
	15.6" HD (1366x768)		nti-glare TN				0° Non-touch	Security	Power-on password, hard disk password, supervisor password, security keyhole		
	15.6" FHD (1920x	(1080) A	nti-glare IPS	250 nits	16:9	600:1 1	70° Non-touch	Security chip	Discrete TPM 2.0, TCG Certified		
Multi-touch	None							Fingerprint reade	rNone		
Storage	Up to two drives (5	0		NFČ .	None		
	 HDD / SATA 6 M.2 2242 SSD 						tem™	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)		
Optical	None	7 1 010	TVIVIO, I OI	0.0 X Z 0	0.0 0.	O X T		Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 10.3 hr		
Ethernet	Gigabit Etherne	t Conne	ction, Realte	ek R81110	SUS				* Battery life varies significantly with settings, usage, & other factors		
WLAN +	One of the follow	wing, co	nfigurable b	v model:				AC adapter	45W or 65W USB Type-C AC adapter		
Bluetooth™	 Realtek® RTL8822BE, Wi-Fi 2x2 802.11ac + Bluetooth 4.2, M.2 card 								Preload <i>(optional)</i> Windows® 10 Home 64 or Windows 10 Pro 64		
-	 Intel Wireless- 	AC 9260), Wi-Fi 2x2	802.11ac	+ Bluetoo	oth 5.0, M.2	card	Limited warranty	1-year depot repair service		
WWAN	None							Mil-Spec test	None		
SIM card	None							Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant		

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













ThinkPad L380 Platform Specifications

Processor	Intel® Cele	ron® P	rocessor	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	Dimensions	Starting at 3.22 lb / 1.46 kg olor Black or Silver aterial Display cover: Aluminum Bottom: GFRP
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	
	Cel 3965U	_	2	2.2 GHz	-	2MB		Intel HD Graphics 610	Case material	
	i3-7130U i5-7200U	2	4	2.7 GHz 2.5 GHz	- 3.1 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics 620	Smart card reade Media reader	MicroSD card reader
	8th Generation Intel Core i5 / i7 Processor								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),
	\vdash	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole
	i3-8130U i5-8250U i5-8350U i7-8550U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz	4MB 6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	Monitor cable (optional) Bundled Accy	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable
Graphics	Intel HD Graphics 610, 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)								Camera Audio support	HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
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								Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Display Multi-touch (opt)	Some: 13 25 Some: 13	3.3" (33 50 nits, 3.3" (33 50 nits,	38mm) H 16:9 ası 38mm) F 16:9 ası	ID (1366x7 pect ratio, 5 HD (1920x pect ratio, 7	68), anti-gla 500:1 contra 1080), anti- 700:1 contra	are, LE ast ratio glare,	D backlight.	ıht, IPS,	Security Security chip vPro (optional) Fingerprint reade NFC (optional)	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 keyboard bezel, anti-spoofing technology Near Field Communication
Storage	One of the fo	ollowing) / SAT	g, configui A 6.0Gb/	rable by mod /s (e.g. xxx)	el: GB SSD M	2)		M O DOL: NIVAA:	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optane™ memory Optical	● M.2 SSD /None None) / PCI	e invivie,	PCIE 3.0 X	(4, 32GD/S	(e.g. x	XXGB SSD	M.2 PCIe NVMe)	Max battery life AC adapter	MobileMark® 2014: 16.1 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro)								Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™	via optional ThinkPad Ethernet Extension Cable Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS								Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
WWAN SIM card	None None								Mil-Spec test	S-year/ 1-yr battery limited onsite service MIL-STD-810G military testing
Silvi Calu									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant

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

Lenovo April 2019





















ThinkPad L390 Platform Specifications

Processor	8th Generation Intel® C	Core™ i3 /	i5 / i7 Proce	sor				Smart card reade	
	Processor # of # of Number Cores Threa				Memory Types		essor phics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i3-8145U 2 4 i5-8265U	2.1 G	Hz 3.9 GH:	4MB	,	Intol LIUE	O 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,
	i5-8365U 4 8 i7-8565U	1.6 G	Hz 4.1 GH:	6MB	DDR4-2400		20	Monitor cable	microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed USB-C to VGA: Lenovo USB-C to VGA Adapter
Graphics	Intel UHD Graphics 62 supports external digits supports three indeper Max resolution: 4096x	0 in proce al monitor ndent disp	essor; via HDMI or olays;	USB Typ		30Hz (HE	OMI)	(optional) Bundled	USB-C to VGA + Power Adapter: Lenovo USB-C to VGA plus Power Adapter USB-C to HDMI: Lenovo USB-C to HDMI Adapter USB-C to HDMI + Power Adapter: Lenovo USB-C to HDMI plus Power Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter USB-C to RJ45: Lenovo USB-C to Ethernet Adapter
Chipset Memory	Intel SoC (System on 0 32GB max / 2400MHz * Installed memory is actu	DDŔ4, dı	ual-channel d				sockets	Accessories (optional) Camera	USB-C to USB-A: USB-C to USB-A Adapter USB-C to USB-C: Lenovo USB-C to USB-C Cable 2M
Display	Size Resolution	Surface	Type Brightn	Acnos	ct Contrac		Viewing Angle	Audio support	HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
		Anti-glare			700:1 (pc		90°	Keyboard	dual array microphone, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, optional LED backlight
	13.3" FHD (1920x1080)	Anti-glare	IPS 250 n	s 16:9	800:1 (mu		170°	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Multi-touch (opt)	On-cell touch, supports		· ·	D only)				Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	One of the following, confiM.2 2280 SSD / SATM.2 2242 SSD / PCI	Ä 6.0Gb/s e NVMe,	s PCle 3.0 x 2					System Mgt (opt) Fingerprint reade NFC (optional)	Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
	 M.2 2280 SSD / PCI Intel Optane™ Memory M.2 2280, PCIe NVN 	ory H10 w	ith Solid Stat	e Storage	9,			Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 14.61 hr
Optical	None								* Battery life varies significantly with settings, usage, & other factors
Ethernet	Native Intel Ethernet C via optional ThinkPad I	Ethernet E	Extension Ca	i- <i>vPro</i>) oi ble or	r I219-LM (1	vPro)		AC adapter Preload	45W or 65W USB Type-C AC adapter Windows® 10 Home 64 or Windows 10 Pro 64
WLAN	Lenovo USB-C to Ethe			Divista	h			Limited warranty	One of the following, configurable by model:
Bluetooth™	Intel Wireless-AC 9560 Bluetooth 5.0 wireless,							_	 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN SIM card	None None								3-year/1-yr battery limited onsite service
Dimensions		92" v 0 74	"; 321.8mm	224 2mi	m v 10 0mn	<u> </u>		Mil-Spec test	MIL-STD-810G military testing
Weight Case color Case material	Starting at 3.22 lb / 1.4 Black or Silver Display cover: Alumin Bottom: GFRP	l6 kg	· , 3∠1.6⊞1	224.2MI	III X 10.0MN			Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo July 2019



ThinkPad L470 Platform Specifications

Processor	6th Gener	ation Ir	ntel® Cor	e™ i3 / i5 /	i7 Process	or or			WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics		 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card
	i3-6006U i3-6100U i5-6200U	2	4	2.0 GHz 2.3 GHz 2.3 GHz	- - 2.8 GHz	3MB 3MB 3MB	DDR4-2133	Intel HD Graphics 520	SIM card (opt)	• Integrated Mobile Broadband 4G LTE, Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card
	i5-6300U			2.4 GHz	3.0 GHz	3MB			Dimensions	WxDxH: 13.35" x 9.25" x 0.94"; 339mm x 235mm x 23.9mm
		-				l Core	i3 / i5 / i7 P		Weight	Models 3-cell 6-cell
	Processor Number	-	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Integrated model 4.13 lb / 1.87 kg 4.45 lb / 2.02 kg Discrete model 4.16 lb / 1.89 kg 4.48 lb / 2.03 kg
	Cel 3965U		2	2.2 GHz	-	2MB		Intel HD Graphics 610	Case color Case material	Black PC/ABS plastic
	i3-7100U i5-7200U i5-7300U i7-7500U i7-7600U	2	4	2.4 GHz 2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	- 3.1 GHz 3.5 GHz 3.5 GHz 3.9 GHz	3MB 3MB 3MB 4MB 4MB	DDR4-2133	Intel HD Graphics 620	Smart card reade Media reader Ports	er Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC) Three USB 3.1 Gen 1 (USB 3.0, one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	* i7 proce	ssor is	NOT ava	ailable in El	MEA)HD720p resolution, fixed focus
Graphics	Intel HD G supports of supports t	Graphic externa three in	s 620 in I analog depende	monitor via	and AMD É a VGA and s:	Radeon digital r	nonitor via l	, 2GB memory; Mini DisplayPort; 200@60Hz (VGA)	Audio support Keyboard UltraNav™	HD Audio, Realtek ALC3268 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack 6-row, spill-resistant, multimedia Fn keys TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Chipset				ip) platform	`	P Cable	e); 1920X12	200@60HZ (VGA)	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
Memory	32GB max * System ci	x / 2400 locks do	OMHz DI wn for pro	DR4, dual-o ocessors with	channel cap lower mem	ory conti	roller	O-DIMM sockets	vPro (optional)	Intel vPro Technology r Optional: Swipe style fingerprint reader on the keyboard bezel None
Display				D (1366x76 bect ratio, 5			D backlight,		Battery	Li-ion 3-cell (24Wh) or 6-cell (48Wh or 72Wh)
	Some: 14	1.0" (35	5mm) Fl	HD (1920x ⁻	1080), anti-	glare, L	ED backlig		Max battery life ¹⁰	Models 3-cell 6-cell 48Wh 6-cell 72Wh
Multi-touch	None 25	50 nits,	16:9 asp	pect ratio, 7	00:1 contra	ast ratio	, 170° view	ing angle	(MobileMark® 2014)	Integrated model 7.24 ftf 14.48 ftf 21.72 ftf
Storage		s one HI	DD slot or	one M.2 228	30 slot exclus	sively for	storage		-	Discrete model 4.34 hr 8.68 hr 13.02 hr
Otorage	Some: H	DD / S	ATA 6.00	Sb/s, 2.5" w System™					AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W slim tip AC adapter
	Some: S Some: M Some: 12	SD / SA I.2 SSD 28GB N	ATA 6.00) / PCle I /I.2 SSD	ib/s, 2.5" w NVMe, PCI	e 3.0 x 2, 1 Gb/s, in W\	6Gb/s	g. xxxGB SS ot as 2nd S	,	Preload	Windows® 7 Professional 64 preinstalled Some: Windows 10 Home 64 through downgrade rights in Windows 10 Pro 64 • Lenovo Solution Center • Lenovo Setting
Optical	None									 Lenovo PowerEngage ThinkVantage Product Recovery Microsoft Office preloaded; purchase a product key to activate
Ethernet	Non-vPro vPro mod			nernet Con nernet Con			cksonville) Jacksonville	e)		 ThinkVantage System Update Adobe® Reader®
WLAN	 Realtek[®] Intel Dua 	RTL8	822BE, V Wireles	rable by mod Ni-Fi 2x2 8 s-AC 8260,	02.11ac + E Wi-Fi 2x2	802.11	ac + BT4.1,	M.2 card		 Microsoft® Office preloaded; purchase a product key to activate McAfee® LiveSafe™ (30-day trial)
Bluetooth™	Bluetooth	4.1 wir	eless, in	tegrated in	Wi-Fi + Blu	etooth	ac + BT4.1, combo ada -4.1 by Windo	pter	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
									Mil-Spec test	MIL-STD-810G military testing
									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specifi	cations above	e may n	ot be ava	ilable in all	regions.					Lenov









ThinkPad L480 Platform Specifications

Processor	7th Gener	ation I	ntel® Cor	e™ i3 / i5 P	rocessor o	r			WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Intervited Mobile Broadband 4C LTE.
	i3-7130U i5-7200U i5-7300U	2	4	2.7 GHz 2.5 GHz 2.6 GHz	- 3.1 GHz 3.5 GHz	3MB 3MB 3MB	DDR4-2133	Intel HD Graphics 620	SIM card (opt)	 Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card *For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card
	8th Gener	ation I	ntel Core	i3 / i5 / i7 l	Processor		•		Dimensions	WxDxH: 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Weight Case color	Starting at 3.71 lb / 1.68 kg Black PC/ABS plastic
	i3-8130U i5-8250U i5-8350U i7-8550U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz	4MB 6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620	Case material Smart card reade Media reader Ports	r <i>Optional</i> : Smart card reader MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
		is NOT	ı available i	n US and El		OIVID			-	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),
Graphics	Intel HD G Intel HD G AMD Rade (discrete r supports e	Graphic Graphic eon 53 nodels externa	s 620 or s 620 or 0, 2GB 0 are NOT	Intel UHD Intel UHD ADDR5 me available nonitor via	Graphics 6 Graphics 6 mory in EMEA); HDMI or U	20 in p	rocessor on rocessor an e-C;	ly or d	Monitor cable (optional)	headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	supports t	hree in ution:	ndepende 4096x23	ent displays	; (USB Type-	·C): 409	96x2160@3	OHz (HDMI)	Camera (optional,	One of the following, configurable by model: • HD720p camera, fixed focus
Chipset Memory	Intel SoC 32GB max	(Syste x / 240	m on Chi 0MHz DE	p) platform	hannel car	able, t	wo DDR4 S	O-DIMM sockets	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
Display	22	20 nits,	16:9 asp	ect ratio, 5	00:1 contra	st ratio	D backlight,) LED backlig		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-cell to	50 nits, uch, su	16:9 asp upports 1	ect ratio, 8 0-finger ge	00:1 contra sture (FHD	st ratio	o, 170° view	ing angle	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	Some: H	DD/S SD/S	ATA 6.0G ATA 6.0G	one M.2 228 3b/s, 2.5" w 3b/s, 2.5" w NVMe, PCI	ide, 7mm h ide, 7mm h	nigh, Ad igh (e.g		ion System™ SD)	Fingerprint reader	Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the keyboard bezel, anti-spoofing technology Near Field Communication
	Some: 12	28GB N	M.2 SSD	/ PCIé NVI	Me, PCle 3	.0 x 2,			Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Optane™ memory Optical		WWAI	N slot as	2nd Storag	je, mutually	exclus	sive with WV	VAN	Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 12.2 hr * Battery life varies significantly with settings, usage, & other factors
Ethernet		model	: Intel Eth	nernet Con	nection I21	9-V (Ja	cksonville)		AC adapter	45W or 65W USB Type-C AC adapter
-	vPro mod	el:	Intel Eth	nernet Con	nection I21		Jacksonville)	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (optional)	Realtek® Intel Dua	RTL8	822BE, V Wireless	s-AC 8265,	02.11ac + E Wi-Fi 2x2	802.11		card (US only) oth 4.1, M.2 card lows OS	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
-				ilabla in all					Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant





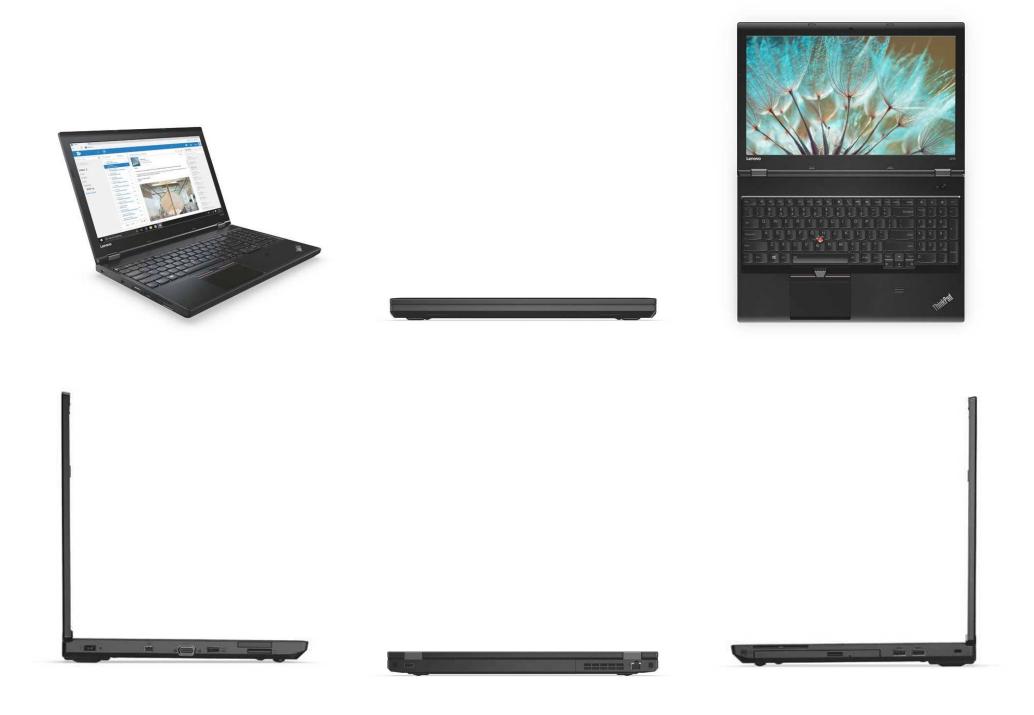






ThinkPad L490 Platform Specifications

Processor	Intel® Cele	eron® F	Processo	r or 8th Ger	neration Int	el Core	e™ i3 / i5 / i7	7 Proces	sor	Dimensions	<i>WxDxH:</i> 13.19" x 9.25" x 0.89"; 335mm x 235mm x 22.5mm
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	Memory Types		cessor phics	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		D Graphics 310	Smart card reade	r Optional: Smart card reader
	i3-8145U i5-8265U	2	4 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	D Graphics 320	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)ZU		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 monitor via ent displays	and AMD n EMEA); HDMI or U ;	Raded SB Typ				Monitor cable (optional) Bundled Accy Camera (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 USB-C to DP: Lenovo USB-C to DisplayPort Adapter None 1) One of the following, configurable by model:
Chipset Memory	Intel SoC 64GB max * Installed i	(Syste x / 240 memory	m on Chi 0MHz DI is actually	p) platform DR4, dual-c / 2666MHz b	hannel cap ut run at 213	able, t	wo DDR4 S or 2400MHz o	O-DIMM due to Inte	l sockets el limitation	''	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec /
Display	Size Res	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
	14.0" HD (`		N Anti-glare		16:9		45% 45%	90° 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
			• • • • • • • • • • • • • • • • • • • •	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	SATA 6. 30 SSD	0Gb/s, 2 7 PCle N	.5" wide, 7r .5" wide, 7n IVMe, PCIe IVMe. PCIe	nm high 3.0 x 4	ctive P	rotection Sy	stem™		System Mgt (opt)	Intel vPro Technology r <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Optane™ memory	* Installed I y Optional:	M.2 228	80 SSD is I	PCIe 3x4 but	run at PCIe	<i>3x2 due</i> Cle 3.0	e to M.2 SSD) x 2	adapter li	imitation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Optical Ethernet	None Non-vPro	model	: Intel Eth	nernet Conr	nection I21	9-V (Ja	cksonville)			Max battery life AC adapter	MobileMark® 2014: 12 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
14/1 451	vPro mod					9-LM (Jacksonville	:)		Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN + Bluetooth™ (optional)	 Realtek® (NOT av Intel Wir 	RTL8 railable reless-	822BE, V in EMEA AC 9260,	۹) Wi-Fi 2x2 8)2.11ac + E 302.11ac +	Blueto		card		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
MANANI (antica = 1)			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing
., ,	 One of the following, configurable by model: Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EME) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable None 								EA only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
SIM card Note: The specifica		n may r	not be ava	ilahla in all r	agione					!	Lenov



ThinkPad L570 Platform Specifications

Processor	6th Gener	ation I	ntel® Cor	e™ i3 / i5 /	i7 Process	or or			WWAN (optional)	One of the following, configurable by model:
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	, , ,	Wireless WAN upgradable Integrated Makille Provide and 40 LTE A
	Number	Cores	Threads	Frequency	Frequency		Types	Graphics		 Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455), M.2 card
	i3-6006U	1		2.0 GHz	-	3MB				Integrated Mobile Broadband 4G LTE.
	i3-6100U	1		2.3 GHz	-	3MB				Intel XMM™ 7160 (Fibocom L831-EAU), M.2 card (EMEA only)
	i5-6200U	2	4	2.3 GHz	2.8 GHz	3MB	DDR4-2133	Intel HD Graphics	SIM card (opt)	Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIM card
	i5-6300U	-		2.4 GHz	3.0 GHz	3MB		520	Dimensions	<i>WxDxH:</i> 14.84" x 10.04" x 1.08-1.21"; 377mm x 255mm x 27.6-30.85mm
	i7-6500U	-		2.5 GHz	3.1 GHz	4MB			Weight	Starting at 5.25 lb / 2.38 kg
	i7-6600U	ron® Di	rooccor	2.6 GHz	3.4 GHz	4MB	l i3 / i5 / i7 P	rocccor	Case color Case material	Black PC/ABS plastic
	Processor		# of	Base	Max Turbo		Memory	Processor		t)One slot (ExpressCard/34)
	Number		Threads	Frequency	Frequency	Cache	Types	Graphics	Smart card reade Media reader	er <i>Optional:</i> Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)
	Cel 3965U		2	2.2 GHz	-	2MB		Intel HD Graphics 610	Ports	Four USB 3.1 Gen 1 (USB 3.0, one Always On), VGA, Mini DisplayPort, Ethernet (RJ-45), Dock connector
	i3-7100U	1		2.4 GHz	-	3MB				* Depending on many factors, actual data transfer speed may be lower than theoretical speed
	i5-7200U	2		2.5 GHz	3.1 GHz	3MB	DDR4-2133	Intel HD Graphics	Monitor cable	Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable (MiniDP to DP)
	i5-7300U	4	4	2.6 GHz	3.5 GHz	3MB		620		HD720p resolution, fixed focus
	i7-7500U i7-7600U	-		2.7 GHz 2.8 GHz	3.5 GHz 3.9 GHz	4MB 4MB			Audio support	HD Audio, Realtek® ALC3245 codec / stereo speakers, 1.5W x 2 / dual array microphone, combo audio/microphone jack
		or io N	OT availah	le in EMEA	3.9 GHZ	4IVID			Karda a sud	
Graphics					n processo	r only:			_ Keyboard - UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Graphics	supports of	externa three ir	al analog ndepende	monitor via	a VGA and	digitál r		Mini DisplayPort; 200@60Hz (VGA)	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Chipset Memory	32GB max	x / 240	OMHz DE	p) platform DR4, dual-c		oable, to	wo DDR4 S	O-DIMM sockets	Fingerprint reade NFC Battery	r Optional: Swipe style fingerprint reader on the palm rest None Li-ion 6-cell (48Wh)
Display	Some: 15	5.6" (39 20 nits,	96mm) H	D (1366x76	58), anti-gla 50:1 contra	are, LEI ast ratio	D backlight,		Max battery life	MobileMark® 2014: 14.8 hr * Battery life varies significantly with settings, usage, & other factors
							ED backlig	ht,	AC adapter	45W slim tip AC adapter
	Some: 15	5.6" (39	96mm) Fi	HD (1920x	00:1 or 500 1080), anti-	glare, L	trast ratio _ED backlig , 160° view	ht, IPS,	Preload	Windows® 7 Professional 64 preinstalled Some: Windows 10 Home 64 through downgrade rights in Some: Windows 10 Pro 64
Multi-touch	None	oo mis,	10.9 asp	eci iallo, o	OO. I COIIII	asi ralio	, roo view	ing angle		 Windows 10 Pro 64 Lenovo Companion Lenovo Solution Center Lenovo Setting
Storage Optical (optional	Some: H Some: S Some: M Some: 11	SD / S I.2 SSI 28GB I utually	ATA 6.0G D / PCIe I M.2 SSD v exclusive	ib/s, 2.5" w NVMe, PCI / SATA 6.0 e with WW	ide, 7mm h e 3.0 x 2, 1 Gb/s, in W\ AN	igh (e.g 6Gb/s WAN sl	g. xxxGB S ot as 2nd S	torage,		Lenovo PowerEngage ThinkVantage Product Recovery ThinkVantage System Update Adobe® Reader® Microsoft® Office preloaded; purchase a product key to activate
								I	-	McAfee® LiveSafe™ (30-day trial)
Ethernet	Non-vPro vPro mod				nection I21 nection I21		.cksonville) Jacksonville	e)	Limited warranty	One of the following, configurable by model:
WLAN	 Realtek[®] 	BTL8	822BE, V	rable by mod Vi-Fi 2x2 8	02.11ac + E	3T4.1, I	M.2 card (U ac + BT4.1.	S only)]	 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
	 Intel Dua 	al Band	d Wireless	s-AC 8265.	Wi-Fi 2x2	802.11	ac + BT4.1.	M.2 card	Mil-Spec test	MIL-STD-810G military testing
Bluetooth™	Bluetooth * Intel 8260	4.1 wi	reless, in	tegrated in support BT4	Wi-Fi + Blu .2 but is limit	etooth	combo ada 4.1 by Windo	pter ows OS	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specif										Lenovo



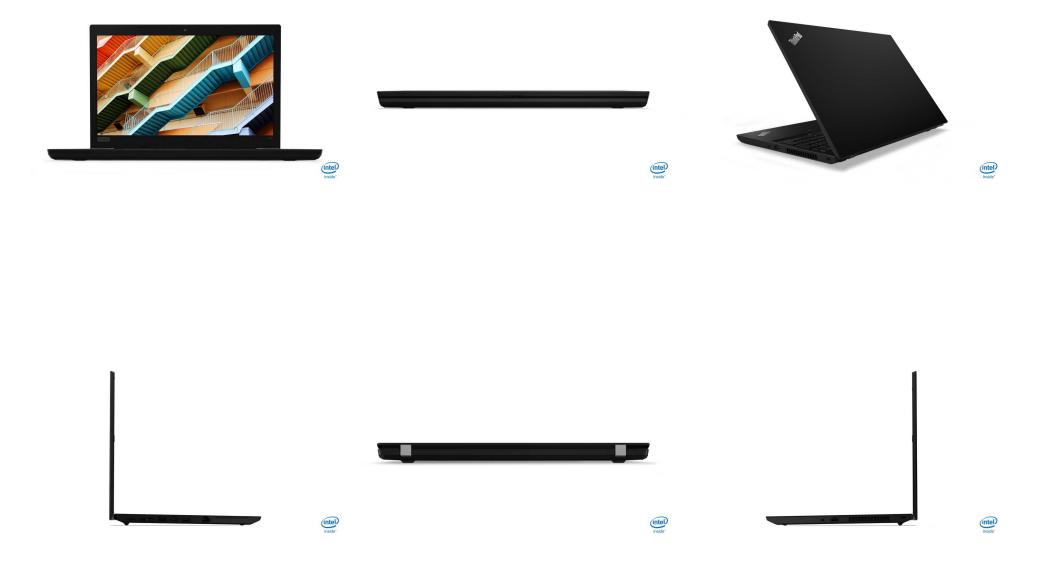






ThinkPad L580 Platform Specifications

Processor	Intel® Cele	eron® F	Processo	r, 7th Gene	ration Intel	Core™	i3 / i5 Proc	essor or	WWAN (optional)	One of the following, configurable by model:
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		 Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only)
	Cel 3965U		2	2.2 GHz	-	2MB		Intel HD Graphics 610		 Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable
	i3-7130U	2		2.7 GHz	-	змв	DDR4-2133	Intel HD Graphics	SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card
	i5-7200U i5-7300U	-	4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB		620	Dimensions	<i>WxDxH</i> : 14.82" x 10.02" x 0.90"; 376.5mm x 254.5mm x 22.95mm
		ation I	ntel Core	i3 / i5 / i7		SIVID			Weight Case color	Starting at 4.46 lb / 2.0 kg Black
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Case material	PC/ABS plastic
	Number	Cores	+	' ' '	Frequency		Types	Graphics	ExpressCard	None er <i>Optional:</i> Smart card reader
	i3-8130U	2	4	2.2 GHz	3.4 GHz	4MB	-		Media reader	MicroSD card reader
	i5-8250U i5-8350U	4	8	1.6 GHz 1.7 GHz	3.4 GHz 3.6 GHz	6MB 6MB	DDR4-2400	Intel UHD Graphics 620	Ports	Two USB 3.1 Gen 1 (one Always On),
	i7-8550U	7		1.7 GHz	4.0 GHz	8MB		020		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),
	* i3-7130U	is NOT	available	in US and El	ИЕА		J.		1	headphone / microphone combo jack, optional smart card reader,
Graphics	Intel HD G AMD Rad	araphic eon 53	cs 620 or 30, 2GB (Graphics 6: mory) in process rocessor an		Monitor cable (optional)	microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
	supports of supports t Max resol	externa hree ir ution:	al digital r ndepende 4096x23	monitor via ent displays 04@60Hz	HDMI or Û ; (USB Type-	,,	*	30Hz (HDMI)	Camera (optional Audio support	/)HD720p camera, fixed focus HD Audio, Realtek ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ / dual array microphone, headphone / microphone combo jack
Chipset Memory	32GB max	x / 240	00MHz DI					O-DIMM sockets	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Display	22 Some: 15	20 nits, 5.6" (39	, 16:9 ́asr 96mm) F	pect ratio, 5 HD (1920x	00:1 contra 1080), anti-	st ratio	D backlight, LED backlig 170° view	ht, IPS,	Security Security chip vPro (optional) Fingerprint reade	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,
Multi-touch	None								NFC (optional)	anti-spoofing technology Near Field Communication
Storage	Some: H Some: S	DD/S SD/S	SATA 6.00 SATA 6.00	3b/s, 2.5" w 3b/s, 2.5" w		igh, Ad igh (e.		ion System™ SD)	Battery Max battery life	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 12 hr
	Some: 12	28GB I	M.2 SSD	/ PCIé NV	Me, PCle 3	0 x 2,			'	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Optane™ memo		WWA	N slot as	2nd Stora	ge, mutually	exclus	sive with WV	VAN	AC adapter Preload	Windows® 10 Home 64 or Windows 10 Pro 64
Optical	None								Limited warranty	One of the following, configurable by model:
Ethernet	Non-vPro vPro mod	model el:	l: Intel Eth Intel Eth	hernet Con hernet Con	nection I21 nection I21	9-V (Ja 9-LM (icksonville) Jacksonville)	Limited warranty	 1-year depot repair service 3-year/1-yr battery depot repair service
WLAN +				rable by mod]	3-year/1-yr battery limited onsite service
Bluetooth™ (optional)	Realtek® Intel Due	RTL8	8822BE, \ d Wireles	Wi-Fi 2x2 8 s-∆C 8265	02.11ac + E Wi₌Fi 2∨2	Bluetoo	th 4.1, M.2 o	card (US only) oth 4.1, M.2 card	Mil-Spec test	MIL-STD-810G military testing
(Optional)							4.1 by Wind		Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Note: The specif				the letter the letter						Lenov



ThinkPad L590 Platform Specifications

Processor	Intel® Cele	eron® F	rocesso	r or 8th Ger	eration Int	el Core	e™ i3 / i5 / i7	⁷ Processo	or	Dimensions	WxDxH: 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 Grapl		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 Optional: Smart card reader
	i3-8145U	2	4	2.1 GHz	3.9 GHz	4MB				Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	i5-8265U i5-8365U	4	8	1.6 GHz 1.6 GHz	3.9 GHz 4.1 GHz	6MB	DDR4-2400	Intel UHD		3	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i7-8565U	4	8	1.8 GHz	4.6 GHz	8MB	BBN 14 2400	62	0		one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models),
Graphics	I7-8665U 4 8 1.9 GHz 4.8 GHz 8MB									(optional)	headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA. Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
						C)· 409	96x2160@2	4Hz (HDN	MI)	Bundled Accy	None
Chipset Memory	Intel SoC	(Svste	m on Chi	p) platform	71		wo DDR4 S	•		1 ''	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio, Realtek ALC3287 codec /
Display	Size Reso	olution	Ту	pe Surface	Brightnes	s Aspe Rati			Viewing Angle		stereo speakers, 2W x 2, Dolby® Advanced Audio / dual array microphone, headphone / microphone combo jack
	15.6" HD (N Anti-glare		16:		45% 45%	90° 170°	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Multi-touch	None		. ,		•	·	•			Security	Power-on password, hard disk password, supervisor password, security keyhole
Storage	SSD / SM.2 228	ATA 6. 0 SSD	0Gb/s, 2. / PCle N	.5" wide, 7r 5" wide, 7n IVMe, PCIe IVMe, PCIe	nm high 3.0 x 4	ctive P	rotection Sy	stem™			Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest Near Field Communication
	* Installed N	N.2 228	0 SSD is I	Cle 3x4 but	run at PCIe	3x2 due	to M.2 SSD	adapter lim	itation	Battery	Integrated Li-ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Optane™ memory Optical	None	inter C	plane m	emory, PCI	e invivie, P	Cie 3.0) X Z			Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 12 hr
Ethernet	Non-vPro			nernet Conr			cksonville) Jacksonville	۸		AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WLAN +				rable by mod		3-LIVI (Jacksonville)		Preload	Windows® 10 Home 64 or Windows 10 Pro 64
Bluetooth™ (optional)	 Realtek® (NOT av Intel Wire 	RTL8 ailable eless-	822BE, V in EMEA AC 9260,	Vi-Fi 2x2 8(\) Wi-Fi 2x2 8)2.11ac + E 302.11ac +	Blueto		card		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
MMMAN (antion = "			,	Fi 2x2 802.		etooth	5.0			Mil-Spec test	MIL-STD-810G military testing
, ,	 II) One of the following, configurable by model: Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EME Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable 								A only)	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
SIM card Note: The specifica	None	movin	ot be ave	ilabla in all r	agions						Lenov







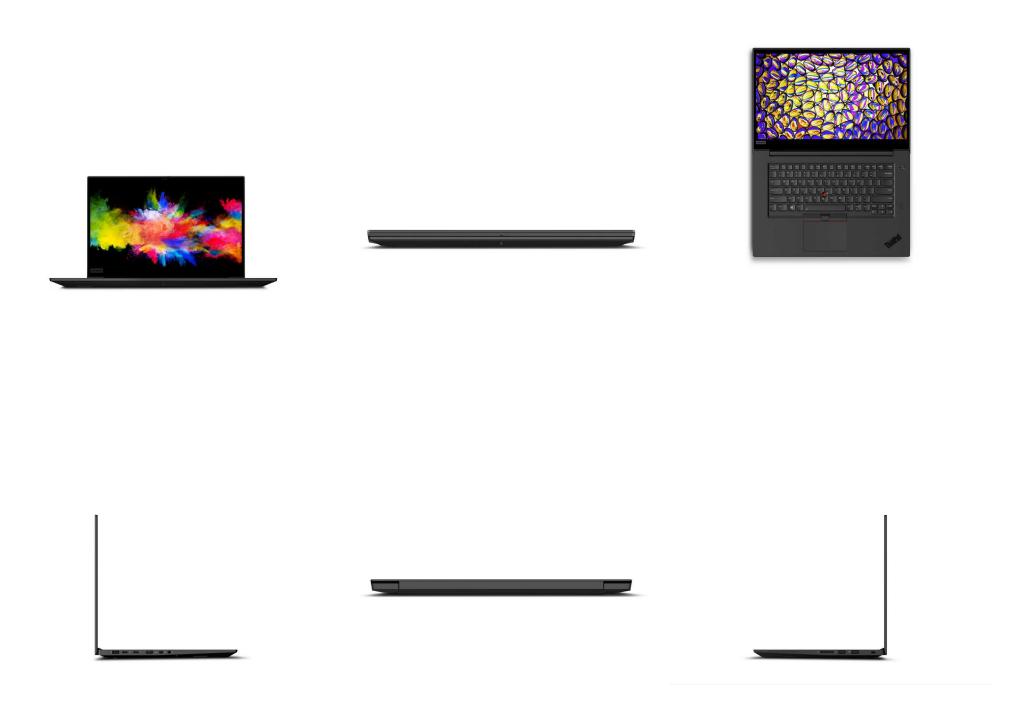


ThinkPad P1 Platform Specifications

Processor	8th Gener	ation I	ntel® Core	e™ i5 / i7 Pr	ocessor or	Intel X	(eon® E Pro	ocessor		r Optional: Smart card reader
	Processor Number	# of Cores	# of Threads		Max Turbo Frequency	Cache	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 i7-8750H i7-8850H	4	8	2.5 GHz 2.2 GHz 2.6 GHz	4.2 GHz 4.1 GHz 4.3 GHz	9MB 9MB	DDR4-2666	Intel UHD Graphics 630	Forts	two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), HDMI 2.0, Ethernet extension connector, headphone / microphone combo jack,
	E-2176M	6	12	2.7 GHz	4.4 GHz	12MB	JDD114-2000	Intel UHD Graphics P630	Monitor cable	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
Graphics	NVIDIA® C supports 6 supports f	Quadro externa our inc	o® P1000 o al digital n dependen	nonitor via it displays;	lax-Q, 4GI HDMI or T	3 GDD hunder	•	/; 60Hz (HDMI)	(optional) Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	Mobile Inte	el CM2 < / 266	246 Chips 6MHz DD	set DR4, ECC o	or non-EC	C (ECC		upported only on	Audio support	 IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
Display	30	00 nits,	16:9 asp	ect ratio, 7	00:1 contra		LED backliç D,	ght, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless glass surface multi-touch touchpad
Multi-touch <i>(opt)</i> Pen	Some: 15 40 10 Capacitive Supports p	5.6" (39 00 nits, 00% ga e-type open ac	96mm) UI 16:9 asp amut, 170 multi-touc ccessory,	ect ratio, 12 or viewing a oh, supports please see	2160), anti 200:1 cont Ingle, multi s 10-finger	rast rat -touch, gestur	LED backli io, anti-reflec e (4K only) empatibility	tion (AR)	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 keyboard bezel None None
Storage Optane™ memory RAID (optional) Optical		'PČle	NVMe, P	Cle 3.0 x 4	, 32Gb/s				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 bundle	d or o	ptional Th	inkPad Eth	ernet Exte	nsion (Preload	 One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64
WLAN Bluetooth™							th 5.0, M.2 combo ada		Limited warranty	Windows 10 Pro 64 for Workstations One of the following, configurable by model:
WWAN SIM card	None None								Limited warranty	1-year depot repair service3-year/1-yr battery depot repair service
Dimensions				.24" x 9.67 .24" x 9.67				7mm x 18.4mm 7mm x 18.7mm	Mil-Spec test	3-year/1-yr battery limited onsite service MIL-STD-810G military testing
Weight	Non-touch	n mode	e <i>l:</i> ´starti	ng at 3.76 ng at 4.06	lb (1.7 kg):				Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
Case color Case material	Black	ver: (RP hybrid;	-					

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

Lenovo July 2019



ThinkPad P1 (2nd Gen) Platform Specifications

Processor	9th Gener	ation li	ntel® Cor	e™ i5 / i7	i9 Pro	cessor or	Intel X	(eon® E l	Processo	r	Dimensions	WxDxH (non-touch): 14.24" x 9.67" x 0.72"; 361.8mm x 245.7mm x 18.4mm
	Processor Number	# of Cores	# of Threads	Base Frequen		Turbo Cac	neı	emory Types	Proce Grapl		Weight	WxDxH (multi-touch): 14.24" x 9.67" x 0.74"; 361.8mm x 245.7mm x 18.7mm Non-touch model: starting at 3.75 lb (1.7 kg); Multi-touch model: starting at 4.0 lb (1.81 kg)
	i5-9400H	4	8	2.5 GH		GHz 8M	_				Case color	Black paint (FHD model) or black weave (UHD model)
	i7-9750H i7-9850H	6	12 12	2.6 GH:		GHz 12M	ID	i	Intel UHD 63		Case material	Display cover: CFRP/GFRP hybrid; Bottom: Aluminum allov
	i9-9880H	8	16	2.3 GH	_	GHz 16M	— 111111	R4-2666	00.	•	Smart card reade	er Optional: Smart card reader
	E-2276M	6	12	2.8 GH		GHz 12M	IB		Intel 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 UHD Intel UHD NVIDIA® C supports of supports for Max resolu Mobile Inte	Graph Quadro externa our inc ution:	nics 630 c T1000 al digital r depender 4096x21 246 Chips	or P630 ii or T2000 monitor v nt display 60@60H set	n proce Max-C a HDM s; z (Thui	essor and Q, 4GB GD II or Thund nderbolt);	lerbolt 4096x	™; 2160@6	0Hz (HDI		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, 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 HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
Memory	64GB max Xeon proc	(/ 266	6MHz ĎI	DR4, EC	or no	n-ECC (EC	CC fun	ction su	pported o	only on	Bundled Accy	Optional: ThinkPad Ethernet Extension Cable
Display	Size Reso		, duar-cri			Brightness		ct Contras	st Color	Viewing Angle		One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	15.6" FHD	`	_ ′	IPS Ant	-glare	300 nits	16:9		72% NTSC	170°	Audio support	HD Audio, Synaptic [®] CX11880 codec / stereo speakers, 2W x 2, Dolby [®] Audio [™] Premium / dual array far-field microphone, headphone / microphone combo jack,
	15.6" HDR	(1920x ⁻ 400, Vision	′	IPS Ant	-glare	500 nits	16:9	1200:1	72% NTSC	170°	 Keyboard	Dolby Atmos® sound system 6-row, spill-resistant, multimedia Fn keys, LED backlight
	UHD 15.6" HDR	(3840x	2160)	IPS Ant	-glare	500 nits	16:9	1200:1	100% Adobe	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless glass surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
	15.6" UHD HDR Dolby	(3840x	2160) ue Black,	OLED AF	R, AS	SDR 400nit HDR 500nit (Peak)	16:9	100000	:1 100% DCI-P3	170°	Security chip System Mgt (opt) Fingerprint reader Color calibration	Discrete TPM 2.0, TCG Certified Intel vPro Technology r Touch style match on chip fingerprint reader on the keyboard bezel Optional: X-Rite Pantone factory color calibration (UHD model only)
Multi-touch (opt)	Capacitive						ture (L	JHD OLE	ED only),		NFC	None
Pen	anti-reflect	tion (A oen ac	.R), anti-s cessory	smudge (please s	AS) co ee the	ating accessory	comp	atibility f	or details		Battery Max battery life	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 13.8 hr
Storage	Up to two N M.2 2280	1.2 SSE)			<u> </u>	оор		<u> </u>		AC adapter	* Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
RAID (optional) Optical	RAID 0/1 s None			WIG 0.0 X	•						Preload	One of the following, configurable by model: • Windows® 10 Home 64
Ethernet	Native Inte								rPro))			Windows 10 Pro 64 Windows 10 Pro 64 for Workstations
WLAN Bluetooth™	Intel Wireld Bluetooth								pter		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN	None											3-year/1-yr battery limited onsite service
SIM card	None										Mil-Spec test	MIL-STD-810G military testing
											Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad P51 Platform Specifications

Processor	6th or 7th G Intel Xeon®					or			Dimensions	WxDxH: WxDxH(Touch			252.3mm x 24.5-29.4mm 252.3mm x 25.8-30.7mm
	Processor	# of	# of	Base	Max Turbo	Casha	Memory	Processor	Weight	Models	4-cell	6-cell	
	Number	Cores	Threads	Frequency	Frequency	Cache	Types	Graphics		Non-touch	5.6 lb / 2.55kg	5.9 lb / 2.67kg	
	i7-6820HQ			2.7 GHz	3.6 GHz			Intel HD Graphics		Multi-touch	6.2 lb / 2.82kg	6.4 lb / 2.90kg	
	E3-1505M v5			2.8 GHz	3.7 GHz	8MB	DDR4-2133	530 Intel HD Graphics P530	Case color Case material		Glass-Fiber Reinforced Magnesium/Aluminum	Plastic;	
	i7-7700HQ	4	8	2.8 GHz	3.8 GHz	6MB		Intel HD Graphics	Smart card reade				
	i7-7820HQ			2.9 GHz	3.9 GHz		DDR4-2400	630	ExpressCard	One slot (Expr	ressCard/34)		
	E3-1505M v6	4		3.0 GHz	4.0 GHz	8MB	DDN4-2400	Intel HD Graphics	Media reader	4-in-1 reader (MMC, SD, SDHC, SDX	C), supports UHS-II	SD card
	E3-1535M v6			3.1 GHz	4.2 GHz			P630	Ports	Four USB 3.1	Gen 1 (USB 3.0, one Al ort 1.2a, HDMI 1.4b, Eth	ways On), USB Type	e-C / Thunderbolt 3,
Graphics	Intel HD Gra						r and		1	* Depending on	many factors, actual data t	ransfer speed may be l	ower than theoretical speed
	NVIDIA Qua supports ext supports fou Max resoluti	ernal d ir indep on: 38	ligital mo endent o 40x2160	nitor via Hl displays; @60Hz (D	DMI, Mini Ĺ isplayPort v	Ďisplay via Mir	ni DisplayPo	ort cable);	Camera (optional) Audio support Keyboard	HD Audio, Readual array mic	altek® ALC3268 codec / rophone, combo audio/i	microphone jack	V x 2 /
01:				`	nunaerboit); 4096	0X2160@24	4Hz (HDMI)	UltraNav™		Point® pointing device a		, optional LLD backlight
Chipset Memory	Mobile Intel				non ECC (ECC f	unotion cur	ported only on			surface multi-touch tou		
Wemory	Xeon proces	ssor), d	ual-chan	nel capabl	e, four DDÌ	34 SO	-DIMM soc		Security Security chip	Discrete TPM	sword, hard disk passwo 2.0, TCG Certified	ord, supervisor pass	word, security keyhole
Display	16:9	aspec	t ratio, 70	00:1 contra	st ratio, 16	0° viev	ving angle	nt, IPS, 250 nits, IPS, 300 nits,	Fingerprint reader Color calibration	Optional: Pan	atch on chip fingerprint		est ation sensor in palm rest
	16:9	aspec	t ratio, 1Ò	000:1 contr	ast ratio, 1	00% g	amut, 170°	viewing angle	NFC	None			
Multi-touch (opt)	Capacitive-t	ype mu	ılti-touch,	supports	10-finger g	esture,	, 220 nits (I	FHD only)	Battery		er 4-cell (66Wh) or 6-ce	ll <i>(90Wh)</i>	
Pen (optional)	ThinkPad Pe					lay			Max battery life ¹⁰ (<i>MobileMark</i> ® 2014)	Model	4-cell	6-cell	
Storage	Up to 3 drives					h Aati	va Drataati	n Custom™	(WODIIEWAIK 2014)	Discrete Grapin		6.1 hr	
	Some: HDE Some: M.2						ve Protection	on System™		Hybrid Graphics		8.9 hr	
RAID (optional) Optical	RAID 0/1 su None		I OIC IVV	ivio, i Oic c	J.O X 4, 020	<i>3</i> 0/3			AC adapter	170W slim tip	<u> </u>		rs
Ethernet	Non-vPro m						ksonville) acksonville)		Preload	• Windows® 7	ving, configurable by mode Professional 64		
WLAN	One of the fol					-IVI (UC	ionoonviile)		1	preinstalled tWindows® 10	hrough downgrade righ	ts in Windows 10 Pro	0 64
VVLAIN	Intel Dual I)2 11a	c + BT4 1	M 2 card		Windows 10 Windows 10			
	 Intel Dual I 	Band W	/ireless-/	AC 8265, W	/i-Fi 2x2 80	2.11a	c + BT4.1,	M.2 card			Pro 64 for Workstations	i	
Bluetooth™	Bluetooth 4. * Intel 8260a							oter by Windows OS	Limited warranty	One of the follow 1-year depot	ving, configurable by model t repair service	l:	
WWAN (optional)]	 3-year/1-yr b 	attery depot repair serv		
	Wireless V				- ^						pattery limited onsite ser	rvice	
	 Integrated Qualcomm 	iviodile Snar ®	roadba dragon [⊤]	#110 4G L1E M X7 LTF-4	=-A, A (Sierra W	ireless	EM7455).	M.2 card	Mil-Spec test		G military testing		
SIM card (opt)	Micro-SIM c	ard slo	t, opt Ver	izon LTE (l	US) or Len	ovo® C	Connect (EN	MEA) SIM card	Environment	EPEAT™ Gold	(US only); ENERGY S	TAR® 6.1; RoHS-con	npliant

September 2018



ThinkPad P52 Platform Specifications

Processor	8th Genera	ation Ir	ntel® Core	e™ i7 / i9 Pr	ocessor or	Intel X	eon® E Pro	ocessor	Dimensions	WxDxH: 14.86" x 9.93" x 0.96-1.16"; 377.4mm x 252.3mm x 24.5-29.4mm
		# 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	Black 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	r <i>Optional:</i> Smart card reader None
	supports fo	iadro® iB mer xterna our ind ition: 3	P1000 (4 mory, VR Il digital n ependen 3840X21 5120X28	4GB memo ready); nonitor via t displays; 60@60Hz 80@30Hz	ry), P2000 HDMI, Min (DisplayPo	(4GB i Displa rt via M	ayPort, or T 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 *Depending on many factors, actual data transfer speed may be lower than theoretical speed
Memory	128GB nor	n-ECC on pro	or 64ĠE cessor), are actually	B ECC max dual-chanr y 2666MHz l	nel capable out run at 24	e, four D	DR4 SO-E	ction supported DIMM sockets imitation	Camera (optional) Audio support	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus R camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Display		0 nits,	16:9 asp	ect ratio, 7	00:1 contra			ght, IPS,	-Audio Support	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
	Some: 15.	.6" (39 0 nits,	6mm) 4k 16:9 asp	viewing an ((3840x21 ect ratio, 1 ° viewing a	60), anti-gl 000:1 cont	rast rat	D backligh io,	t, IPS,	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad
Multi-touch (opt) Pen	Capacitive- Supports p	-type r	nulti-touc	h, support	s 10-finger	gestur			Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified
Storage	Some: N	HDD / M.2 SS	SATA 6.0 SD / PCIe)Gb/s, 2.5" e NVMe, P(wide, 7mm Cle 3.0 x 4	, 32Gb	's	ection System™	vPro (optional) Fingerprint readel Color calibration NFC (optional)	Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest None Near Field Communication
Optane™ memory RAID <i>(optional)</i> Optical	RAID 0/1 s None			emory, PCI	e invivie, P	Cie 3.0) X 2		Battery Max battery life	Li-ion 90Wh battery Discrete mode: 6.1 hr; Hybrid mode: 8.9 hr
Ethernet	Non-vPro r vPro mode			ernet Coni ernet Coni					(<i>MobileMark</i> ® 2014) AC adapter	170W slim tip AC adapter
Bluetooth™	Intel Wirele Bluetooth 5	5.0 wir	eless, int	egrated in	Wi-Fi + Blu				Preload	One of the following, configurable by model: Windows® 10 Home 64 Windows 10 Pro 64
WWAN (optional)	Integrated Intel XMM ^T					t				Windows 10 Pro 64 for Workstations
SIM card (opt)	Nano-SIM	card s	slot, optio	nal Verizon	LTE (US)	SIM ca	rd		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
Note: The specifica									Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant









ThinkPad P52s Platform Specifications

Processor An of Number Processor An of Number Processor Requency Frequency	5-20.2mm
Graphics Intel UHD Graphics 620 in processor and NYDIDA Quadro* P500, 2GB GDDP5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Chipset Intel Soc (System on Chip) platform on Chip) platform on Chip) platform on USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 2 / Thunderboll 3 (with the function of Power Delivery and one USB 3.1 Type-C Gen 2 / Thunderboll 3 (with the function of Power Delivery and one USB 3.1 Type-C Gen 2 / Thunderboll 3 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 2 / Thunderboll 3 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 2 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and one USB 3.1 Type-C Gen 1 (with the function of USB 2 (body) one USB 2 (body)	
Hell UHD Graphics 820 in processor and NVDID Quadro* P500, 2GB GDDR5 memory; supports external digital monitor via HDMI or USB Type-C; supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@30Hz (HDMI) Chipset Intel SoC (System on Chip) platform and the processors with lower memory controller Memory 32GB max / 2400MHz DDR4, dual-channel capable, two DDR4 SO-DIMM sockets 'system clocks down for processors with lower memory controller Display Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 27° gamut, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 27° gamut, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 27° gamut, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 27° gamut, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 27° gamut, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 170° viewing angle Some: 15.6" (396mm) HFID (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 1	
Memory Memory Some Som	nd DP),
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, 16:9 aspect ratio, 1000:1 contrast ratio, 170° viewing angle Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only) Storage System has one HDD slot or one M.2 2280 slot exclusively for storage Some: HDD / SATA 6.0Gb/s, 2.5° wide, 7mm high, Active Protection System™ Some: SSD / SATA 6.0Gb/s, 2.5° wide, 7mm high (e.g. xxxGB SSD) Some: 128GB M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional: Intel Optane memory, PCle NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 1.1 kg/s00 nits, 16:9 aspect ratio, 170° viewing angle Audio support **Reyboard Oltranation for the following, configurable by model: **HD720p camera with ThinkShutter camera privacy, fixed focus **In camera and HD720p camera, fixed focus **HD Audio, Realtek* ALC3287 codec / stereo speakers, 2W x 2, Dolby* Audio™ Premium / dual array microphone, headphone / microphone combo jack Keyboard UltraNav™ Fecurity opports 10-finger pesture (FHD only) Some: 128GB M.2 SSD / PCle NVMe, PCle 3.0 x 2, 16Gb/s, in WWAN sot as 2nd Storage, mutually exclusive with WWAN Optical None Ethernet Non-vPro model: Intel Ethernet Connection 1219-V (Jacksonville) WLAN + Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ Intel SWAN upgradable visible by model: Intel grated Mobile Broadband 4G LTE, intel XMM™ 7262 (Filocom L830-EB), M.2 card (EMEA only) Intel grated Mobile Broadband 4G LTE-, Intel grated Mobile Broadband 4G LTE-, Intel grated Mobile Broadband 4G LTE-, Intel grated Mobile Broadband 4G LTE-A	oretical speed
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: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optane™ memory Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 WLAN + Bluetooth™ Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ WWAN (optional) WWAN (optional) WWAN (optional) One of the following, configurable by model: Nore Vireless WAN upgradable Intel ZMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-, Intel SMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Audio support HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack Keyboard UltraNav™ Gerow, spill-resistant, multimedia Fn keys, numeric keypad, optional L UltraNav™ FrackPoint® pointing device and buttonless Mylar surface multi-touch Security Security Chip Power-on password, hard disk password, supervisor password, security chip Pro (optional) Fingerprint reader Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery Max battery life (MobileMark® 2014) Max battery life (MobileMark® 2014) * Battery Intel Stafes Cadapter Audio Survey X x 2, 16Gb/s stereo speakers, 2W x 2, Dolby® Audio™ Fremium / dual array microphone, headphone / microphone combo jack Keyboard UltraNav™ Forw, political Final Responding the proprint reader on the palm reader	
Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s in WWAN slot as 2nd Storage, mutually exclusive with WWAN Optional: Intel Optane memory, PCIe NVMe, PCIe 3.0 x 2 Optical None Ethernet Non-vPro model: Intel Ethernet Connection I219-V (Jacksonville) VPro model: Intel Ethernet Connection I219-LM (Jacksonville) WLAN + Intel Bual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card Bluetooth™ * Intel S265ac card supports B74.2 but is limited to B74.1 by Windows OS WWAN (optional) WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, • Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A,	
Optane™ memory Optional: Intel Optane memory, PCle NVMe, PCle 3.0 x 2 Ethernet	ouchpad
WLAN + Bluetooth™ WWAN (optional) WWAN (optional) WWAN (optional) Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, * Battery Iife varies significantly with settings, usage, & other factors 65W USB Type-C AC adapter	
Bluetooth™ * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, • Integrated Mobile Broadband 4G LTE-A,	31
WWAN (optional) One of the following, configurable by model: • Wireless WAN upgradable • Integrated Mobile Broadband 4G LTE, Intel XMM™ 7262 (Fibocom L830-EB), M.2 card (EMEA only) • Integrated Mobile Broadband 4G LTE-A, • Integrated Mobile Broadband 4G LTE-A,	
• Integrated Mobile Broadbarid 4G LT E-A,	26.3 hr
* For non-WWAN modèl, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card * For non-WWAN modèl, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card * Limited warranty * One of the following, configurable by model: * 1-year depot repair service * 3-year/1-yr battery limited onsite service	
Mil-Spec test MIL-STD-810G military testing	
Environment EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant	Lenovo







ThinkPad P53s Platform Specifications

Processor	8th G	eneration Intel® (Core™	i7 Proces	sor					Dimensions	<i>WxDxH</i> : 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
	Proce Numb i7-856	er Cores Threa	ds Fr	equency F	requency	ache	Memory Types	Proce Grap ntel UHD	hics	Weight Case color Case material	starting at 3.87 lb / 1.75 kg Black Display cover: PPS / 50% GF;
	i7-866					ВМВ	DDR4-2400 "	62			Bottom: PA / 50% GF er Optional: Smart card reader
	NVID suppo suppo Max r	JHD Graphics 62 IA Quadro® P520 orts external digit orts three indepe resolution: 3840	, 2GB al moi ndent 2160	GDDR5 r nitor via H displays; @60Hz (U	nemory; DMI or USI		•	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 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),
Memory	48GE	SoC (System on max / 2400MHz or 16GB memory illed memory is acti	DDŔ solde	4, dual-char ered to sys	temboard,	one D			ĸet	Monitor cable	headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter
Display	Size	Resolution	Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Bundled Accy	USB-C to DP: Lenovo USB-C to DisplayPort Adapter None
	15.6"	FHD (1920x1080)	IPS	Anti-glare	250 nits	16:9	700:1	45%	170°	Camera (optional	I) One of the following, configurable by model:
	15.6"	UHD (3840x2160) Dolby Vision™ HDF	IPS	Anti-glare	500 nits	16:9	1200:1	100% Adobe	170°	Audio support	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus HD Audio. Realtek® ALC3287 codec /
		ell touch, support			ure (FHD o	nly)					stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array far-field microphone, headphone / microphone combo jack
	M.2M.2	2280 SSD / SAT 2280 SSD / PCI 2242 SSD / PCI	e NVI e NVI	Me, PCIe 3 Me, PCIe 3	3.0 x 2					Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
		l Optane™ Memo 2280, PCle NVN			d State St	orage,				Security Security chip System Mat (opt)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
		/Pro model: Intel model: Intel					ksonville) acksonville)				er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Bluetooth™	Bluet	Wireless-AC 9560 both 5.0 wireless	integ	rated in W	'i-Fi + Blue			er		Battery Max battery life	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) *MobileMark® 2014: 15 hr (FHD model) / 10 hr (UHD model) *15 hr (FHD model) / 10 hr (UHD model)
		f the following, com eless WAN upgra								AC adapter	* Battery life varies significantly with settings, usage, & other factors ' 65W USB Type-C AC adapter
	Inte	grated Mobile Br	oadba	nd 4G LTE	, Fibocom	L830-	EB, M.2 car	d (EME	A only)	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
	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	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service
										Mil-Spec test	MIL-STD-810G military testing
Note: The specifica										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant

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

Lenovo July 2019











ThinkPad P72 Platform Specifications

Processor	8th Generation I	ntel® Cor	e™ i7 Proces	ssor or Int	el Xeor	® E Proces	ssor	Dimensions	WxDxH: 16.38" x 11.06" x 0.96-1.16"; 416mm x 281mm x 24.5-29.4mm Starting at 7.5 lb (3.4kg) Black Display cover: GFRP + PPS; Bottom: Magnesium/Aluminum			
	Processor # of Number Cores i7-8750H i7-8850H	# of Threads		Max Turbo Frequency 4.1 GHz 4.3 GHz	Cache 9MB 9MB	Memory Types	Processor Graphics Intel UHD Graphics 630	Weight Case color Case material				
	E-2176M E-2186M	12	2.6 GHz 2.7 GHz 2.9 GHz	4.4 GHz 4.8 GHz	12MB 12MB	DDR4-2400	Intel UHD Graphics P630	ExpressCard Media reader	r Optional: Smart card reader None 4-in-1 reader (MMC, SD, SDHC, SDXC), supports UHS-II SD card			
Graphics		P600 (44 mory), P4 al digital r dependen 3840X21 5120X28	GB memory 4200 (8GB i monitor via I it displays; 60@60Hz (80@30Hz (y), P2000 memory), HDMI, Mir (DisplayPo	(4GB m or P520 ni Displa ort via N	00 (16GB r ayPort, or T Mini Display	hunderbolt™;	Ports Monitor cable	Four USB 3.1 Gen 1 (one Always On), two USB Type-C / Thunderbolt 3 (with the function of Power Delivery and DP), Mini DisplayPort 1.4, HDMI 2.0, Ethernet (RJ-45), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), security keyhole * Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical sp Optional: Lenovo Mini-DisplayPort to DisplayPort Monitor Cable			
Chipset Memory	Mobile Intel CM2 128GB non-ECC only on Xeon pro * Installed DIMMs	C or 64ĠE ocessor), <i>are actuall</i>	B ECC max dual-chann y 2666MHz b	nel capable out run at 2	e, four [400MHz	DDR4 SO-I due to Intel	DIMM sockets limitation	Camera (optional, Audio support)IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone			
Display	Some: 17.3" (439mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 800:1 contrast ratio, 72% gamut, 170° viewing angle Some: 17.3" (439mm) 4K (3840x2160), anti-glare, LED backlight, IPS, 400 nits, 16:9 aspect ratio, 1000:1 contrast ratio, 100% Adobe CG,							Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, LED backlight 3-button TrackPoint® pointing device and 3-button Mylar surface multi-touch touchpad			
Multi-touch Pen Storage	None Supports pen ac Up to 3 drives (two Some: HDD / Some: M.2 SS	wing angl ccessory, o M.2 SSD SATA 6.0	e please see and one HDL Gb/s, 2.5" v	the acces	ssory co	ompatibility Active Prote	for details		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 None Near Field Communication			
Optane™ memor RAID <i>(optional)</i> Optical	y <i>Optional:</i> Intel C RAID 0/1 suppo None	Optane me						Battery Max battery life	Li-ion 99Wh battery, supports Rapid Charge (charge up to 80% in 1hr) MobileMark® 2014: 18 hr * Battery life varies significantly with settings, usage, & other factors			
Ethernet	Non-vPro model:		nernet Conn nernet Conn					AC adapter Preload	230W slim tip AC adapter One of the following, configurable by model:			
WLAN Bluetooth™	Intel Wireless-A0 Bluetooth 5.0 wi	C 9560, W	/i-Fi 2x2 80	2.11ac + I	Bluetoo	th 5.0, M.2	card		 Windows® 10 Home 64 Windows 10 Pro 64 Windows 10 Pro 64 for Workstations 			
WWAN SIM card	None None							Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service			
								Mil-Spec test	MIL-STD-810G military testing			
								Environment	EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant			









ThinkPad T470 Platform Specifications

Processor	6th Gener	ation Ir	ntel® Core	e™ i5 / i7 P	rocessor o	r			Dimensions	WxDxH:	13.25" x 9.15" x 0.79"; 336.6mm x 232.5mm x 19.95mm					
	Processor	# of	# of	Base	Max Turbo		Memory	Processor	Weight	Models 3-cell or 3 + 3-cell 6-cell or 3 + 6-cell						
	Number			Frequency	Frequency	Cache	Types	Graphics		Magnesium	n 3.49 lb / 1.58 kg 3.92 lb / 1.78 kg					
	i5-6200U			2.3 GHz	2.8 GHz	змв				PPS	3.63 lb / 1.65 kg 4.35 lb / 1.85 kg					
	i5-6300U	2	, [2.4 GHz	3.0 GHz	3MB	DDD4 0100	Intel HD Graphics	Case color	Black						
	i7-6500U	1 2	4	2.5 GHz	3.1 GHz	4MB	DDR4-2133	520	Case material		over: Magnesium Hybrid or PPS;					
	i7-6600U	1		2.6 GHz	3.4 GHz	4MB				Bottom:	Glass-Fiber Reinforced Plastic					
	7th Gener	ation Ir	itel Core	i3 / i5 / i7 F	Processor					rOptional:	Smart card reader					
	Processor	# of	# of	Base	Max Turbo	Cache	Memory	Processor	Media reader Ports	4-In-1 read	der (MMC, SD, SDHC, SDXC), supports SD 3.0, UHS-I B 3.1 Gen 1 (USB 3.0, one Always On),					
	Number	Cores	Threads	Frequency	Frequency	Cache	Types	Graphics	FOIIS		Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and	DP)				
	i3-7100U			2.4 GHz	-	3MB					b, Ethernet (RJ-45), Dock connector	J. _/ ,				
	i5-7200U]		2.5 GHz	3.1 GHz	3MB		Intel HD Graphics	W.C. 1 1 (1)	* Depending	g on many factors, actual data transfer speed may be lower than theoretical s	peed				
	i5-7300U	2	4	2.6 GHz	3.5 GHz	3MB	DDR4-2133	620	WiGig dock (opt)		WiGig dock					
	i7-7500U			2.7 GHz	3.5 GHz	4MB		020	Monitor cable		Lenovo USB-C to VGA Adapter					
	i7-7600U			2.8 GHz	3.9 GHz	4MB			Camera (optional) 720p:	HD720p resolution, fixed focus					
	* i7-6500U	is NOT a	available ii	n EMEA					Audio support		b: IR camera and HD720p camera (mutually exclusive with WiGig) Realtek ALC3268 codec / stereo speakers, 2W x 2 /					
Graphics					essor only		roo® 040N4\	,			microphone, combo audio/microphone jack					
							rce® 940M) OT available	x, e in EMEA);	Keyboard		Il-resistant, multimedia Fn keys, optional LED backlight					
	supports e	externa	l digital n	nonitor via	HDMI or U			,,	UltraNav™		t®pointing device and buttonless Mylar surface multi-touch touchpac					
	supports t	hree in	depende	nt displays	; (LIOD T	0) 40	00 04000	0.411 (1.101.41)	Security		password, hard disk password, supervisor password, security keyho	ole				
						-C); 40	96x2160@	24Hz (HDMI)	Security chip vPro <i>(optional)</i>	Discrete TPM 2.0, TCG Certified						
Chipset	Intel SoC	(Syster	n on Chi	p) platform					Fingerprint reade	Intel vPro Technology r Optional: Touch style match on chip fingerprint reader on the keyboard bezel						
Memory					hannel cap <i>lower mem</i>			O-DIMM sockets	NFC (optional)		d Communication					
Display							D backlight,		Internal battery	Optional: Integrated Li-Polymer 3-cell (24Wh)						
. ,	22	20 nits,	16:9 asp	ect ratio, 4	00:1 contra	ast ratio)		External battery Max battery life		r 3-cell (24Wh) or Li-ion 6-cell (48Wh or 72Wh)					
							ED backlig	ht,	(MobileMark® 2014)	Models	3-cell 3+3-cell 6-cell 48Wh 6-cell 72Wh 3+6-cell 48Wh 3+6-cell 7					
					00:1 or 500 (080) anti-		_ED backlig	ht IPS		micgraica						
	25	50 nits.	16:9 asp	ect ratio. 7	00:1 contra	ast ratio	. 170° view	ing angle		Discrete * Pottory life	6.9 hr 13.9 hr 14.3 hr 21.6 hr 21.2 hr 28.6 h fe varies significantly with settings, usage, & other factors	ır				
Multi-touch (opt)	On-cell to	uch, su	pports 10	O-finger ge	sture (FHD	IPS pa	anel with PF	S cover only)	AC adapter		5W slim tip AC adapter, 45W or 65W USB Type-C AC adapter					
Storage					30 slot exclus				Preload	Windows® 7 Professional 64 preinstalled <i>Some</i> : Windows 10 Home 64						
	Some: HI	DD / SA	ATA 6.0G	b/s, 2.5" w	ide, 7mm h	nigh, Ad	tive Protect	ion System™			hrough downgrade rights in Some: Windows 10 Pro 64					
	Some: Si	3D / 3F		D/S, 2.5" W	iae, 7mm r e 3.0 x 2, 1	iign (e.(g. xxxGB S	SD)		Windows 10 Pro 64 • Lenovo Companion • Lenovo Solution Center • Lenovo Setting						
							ot as 2nd S	torage.								
					AN and Wi					 Lenovo PowerEngage ThinkVantage Product Recovery Microsoft Office preloaded; purchase a product key to activate 						
Optical	None										intage System Update	•				
Ethernet							cksonville)			 Adobe[®] 	Reader®					
	vPro mode	el:	Intel Eth	ernet Con	nection I21	9-LM (Jacksonville	e)			Microsoft® Office preloaded;					
WLAN	One of the	following	g, configur	able by mod	lel (WiGig ca	ın coexis	st with WWAN	I):		purchase a product key to activate • McAfee® LiveSafe™ (30-day trial)						
	Realtek®								Libraria and the state of the s		, ,					
							ac + BT4.1, ac + BT4.1,		Limited warranty		following, configurable by model:					
								м.2 саго 302.11ac + BT4.1,		 1-year depot repair service 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 						
	M.2 card		51000 7	.5 10200, 1				202.7100 7 214.1,								
Bluetooth™	Bluetooth	4.1 wire	eless, int	egrated in	Wi-Fi + Blu	uetooth	combo ada 3T4.1 by Wind	pter	Mil-Spec test		810G military testing					
WWAN (optional)							ist with WiGig		Environment	EPEAT™ (Gold (US only); ENERGY STAR® 6.1; RoHS-compliant					
vv vvAin (<i>optional)</i>	 Wireless 				CI (NANNAIN C	an coex	isi willi widi(g/·			· · · · · · · · · · · · · · · · · · ·					
	Integrate				TE-A,											
	Qualcom	nm® Sn	apdragor	n™ X7 LTE	-A (Sierra	Wireles	ss EM7455)	, M.2 card								
	 Integrate 															
SIM card (opt)					EAU), M.2 (MEA) SIM card								
C.III Jaia (Upi)	1411010-01101	i cara s	ioi, opi v	CHECK LIL	(OO) OI LE	211000	COLLICOT (F	ivien, olivi calu	1							



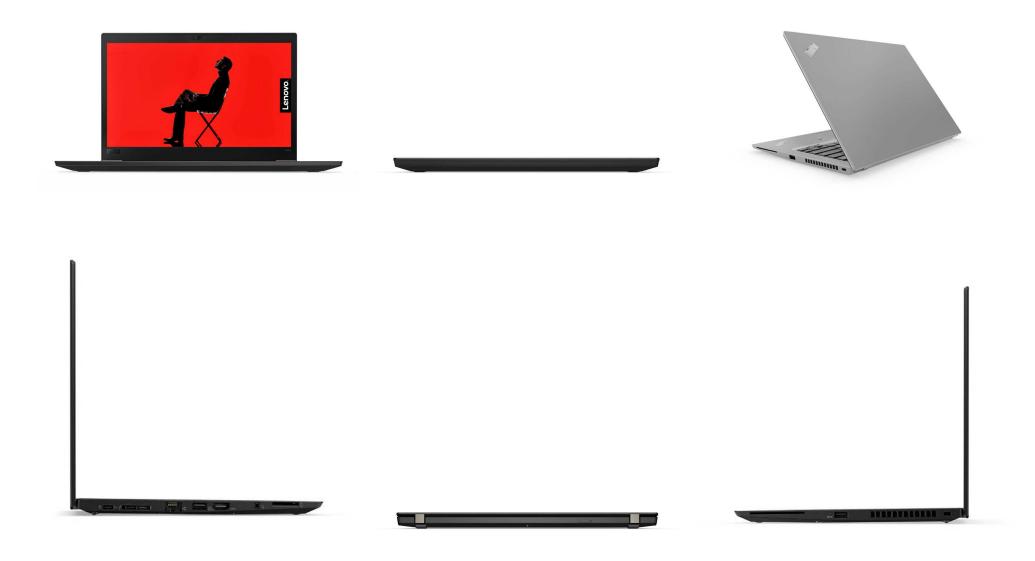
ThinkPad T470s Platform Specifications

Processor	6th Generation Int	tel® Core	e™ i5 / i7 F	Processor			Dimensions	WxDxH: 13.03" x 8.93" x 0.67-0.74"; 331mm x 226.8mm x 16.9-18.8mm			
	Number Cores Threads Frequency Frequency Cache Types Graphics Intel HD Graphics I					Graphics	Weight Case color Case material	Starting at 2.9 lb (1.32kg) Black or Silver Display cover: CFRP Hybrid; Bottom: Magnesium			
	i5-6300U 2 i7-6600U	4	2.4 GHz 2.6 GHz	3.0 GHz 3MB 3.4 GHz 4MB	DDR4-2133	520	Smart card reade	er Optional: Smart card reader 4-in-1 reader (MMC, SD, SDHC, SDXC)			
	or 7th Generation	Intel Co	ore i5 / i7 P	rocessor			Ports	Three USB 3.1 Gen 1 (USB 3.0, one Always On),			
		# of Threads	Base Frequency	Max Turbo Frequency Cache	Memory Types	Processor Graphics		USB 3.1 Type-C Gen 2 / Thunderbolt 3 (w/ the function of Power Delivery and DP), HDMI 1.4b, Ethernet (RJ-45), Dock connector * Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	i5-7200U i5-7300U i7-7500U i7-7600U	4	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.1 GHz 3MB 3.5 GHz 3MB 3.5 GHz 4MB 3.9 GHz 4MB	DDR4-2133	Intel HD Graphics 620	WiGig dock (opt) 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			
							Camera (optional	/)HD720p resolution, fixed focus (models without camera are NOT available in EMEA)			
Graphics	Intel HD Graphics supports external supports three ind	digital m depende	nonitor via nt displays	HDMI or USB Typ			Audio support	HD Audio, Realtek® ALC3268 codec / stereo speakers, 1W x 2 / dual array microphone, combo audio/microphone jack			
Chipset	Max resolution: 4				096x2160@	24Hz (HDMI)	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Memory	20GB or 24GB ma 4GB or 8GB mem * System clocks dow	ax ⁷ / 240 lory sold	ÓMHz DD lered to sy	R4, dual-channel stemboard, one D	DR4 SÓ-D	IMM socket	Security Security chip vPro (optional)	ecurity chip Discrete TPM 2.0, TCG Certified			
Display		16:9 asp	ect ratio, 7	'00:1 contrast ratio	o, 160° view	ing angle	Fingerprint reade NFC (optional)	er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest Near Field Communication			
Multi-touch (opt)	Some: 14.0" (355 300 nits, 1 On-cell touch, sup	l6:9 asp	ect ratio, 7	00:1 contrast ratio	o, 160° view		Internal battery Max battery life MobileMark® 2014: up to 10.5 hr * Battery life varies significantly with settings, usage, & other factors				
Storage	One of the following,						AC adapter	45W slim tip AC adapter, 45W or 65W USB Type-C AC adapter			
Optical	M.2 SSD / SATAM.2 SSD / PCIeNone				xxGB SSD	M.2 PCIe NVMe)	Preload	Windows® 7 Professional 64 preinstalled Some: Windows 10 Home 64 through downgrade rights in Some: Windows 10 Pro 64 Lenovo Companion			
Ethernet	Non-vPro model: vPro model:			nection I219-V (Janection I219-LM ()	-	 Lenovo Solution Center Lenovo PowerEngage Lenovo Setting Microsoft Office preloaded; 			
WLAN	One of the following, Intel Dual Band Intel Dual Band Intel Tri-Band Wi M.2 card	configur Wireless Wireless reless-A	rable by mod s-AC 8260, s-AC 8265, AC 18265,	del (WiGig is mutuall Wi-Fi 2x2 802.11 Wi-Fi 2x2 802.11 WiGig 802.11ad +	y exclusive w lac + BT4.1 lac + BT4.1 - Wi-Fi 2x2	, M.2 card , M.2 card , M.2 card , M.2 card 802.11ac + BT4.1		 ThinkVantage Product Recovery ThinkVantage System Update Adobe® Reader® Microsoft® Office preloaded; purchase a product key to activate McAfee® LiveSafe™ (30-day trial) 			
Bluetooth™	Bluetooth 4.1 wire * Intel 8265ac / 1826	65ac card	l support BT	4.2 but is limited to I	BT4.1 by Win	dows OS	Limited warranty	One of the following, configurable by model: • 1-year depot repair service			
WWAN (optional)	One of the following,Wireless WAN uIntegrated Mobil	pgradab	ole	, ,	ve with WiGig):		 3-year/1-yr battery depot repair service 3-year/1-yr battery limited onsite service 			
	Qualcomm® Sna	apdragor	n™ X7 LTE	E-A (Śierra Wirele	ss EM7455), M.2 card	Mil-Spec test	MIL-STD-810G military testing			
SIM card (opt)	Micro-SIM card	slot, opt	Verizon LT	ΓΕ (ÙS) or Lenovo	o® Connect	(EMEA) SIM card	Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant			



ThinkPad T480 Platform Specifications

Processor				e™ i5 Proc					Dimensions	WxDxH:	13.25" x 9	.15" x 0.79"; 33			
	Processor	# of	_, # of	Base	Max Turbo	Cache	Memory	Processor	Weight	Models		24Wh or 24Wh +		72Wh, or 24Wh +	
	Number	Cores	Threads		Frequency		Types	Graphics	-	Integrated I		3.49 lb / 1.58		3.92 lb / 1.78	
	i5-7200U i5-7300U	2	4	2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB	DDR4-2133	Intel HD Graphics 620		Integrated F		3.63 lb / 1.65		4.08 lb / 1.85	
		L						020	-	Discrete Ma		3.53 lb / 1.60 3.68 lb / 1.67		3.97 lb / 1.80 4.12 lb / 1.87	
				ore i3 / i5 /		or			0		3	3.68 ID / 1.67	kg	4.1210 / 1.87	кд
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Frequency Memory Types Processor Graphics i3-8130U 2 4 2.2 GHz 3.4 GHz 4MB								Case color Case material	Black Display co Bottom:		esium Hybrid or I -Fiber Reinforced			
	i5-8250U i5-8250U i5-8350U i7-8550U i7-8650U	4	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	4MB 6MB 6MB 8MB 8MB	DDR4-2400	Intel UHD Graphics 620	Smart card reade Media reader Ports	ard reader Optional: Smart card reader					
Graphics	Intel HD G NVIDIA® C (discrete g supports e supports t	iraphic GeFord graphic externa hree ir	es 620 or ee® MX15 es is avail al digital r adepende	Intel UHD 50, 2GB GD lable only of monitor via ent displays	Graphics 6 DR5 mem <i>n i7 model</i> HDMI or U	20 in p ory <i>s in EN</i> SB Typ	e-Ć;		Monitor cable (optional)	HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 media reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole *Depending on many factors, actual data transfer speed may be lower than theoretical should be a high to VGA: Lenovo HDMI to VGA Monitor Adapter				,	
Chipset Memory	Intel SoC 32GB max	(Syste	m on Chi 0MHz DI	ip) platform	hannel ca	oable, t	wo DDR4 S	O-DIMM sockets	Camera (optional) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus Audio support HD Audio, Realtek® ALC3287 codec /						
Display		Some: 14.0" (355mm) HD (1366x768), anti-glare, LED backlight, 220 nits, 16.9 aspect ratio, 400:1 contrast ratio							/ tadio oupport	stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack					
	Some: 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 170° viewing angle Some: 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS,								Keyboard UltraNav™						
Multi-touch (opt)	1	70° vi	ewing an				io, 72% gan	nut,	Security Security chip vPro (optional)	Security chip Discrete TPM 2.0, TCG Certified					
Storage	System has Some: H	one H	DD slot or ATA 6.00	one M.2 228 Bb/s, 2.5" w	30 slot exclusion	sively for	ctive Protect	on System™	Fingerprint reade	ngerprint reader Optional: Touch style match on chip fingerprint reader on anti-spoofing technology					ard bezel,
	Some: M	.2 SSE) / PCIe l	ib/s, 2.5" w NVMe, PCI / PCIe NVI	e 3.0 x 4	•	g. xxxGB SS	SD)	Battery	- 4-1					
Optane™ memory	* Installed N	1.2 SSL) is PCIe :	3.0 x 4 but ru	n at PCIe 3.	0 x 2 du	sive with WV e to M.2 SSD	VAN adapter limitation	Max battery life (MobileMark® 2014)	lax battery life Models 24Wh 48Wh 72Wh 24Wh + 24Wh 24Wh + 48Wh 24Wh				24Wh + 72W 29.0 hr	
Optical	None	ie iliei	illory, i C	ie ivvivie, i	Ole J.U X	_				Discrete mo	<i>del</i> 6.6 h	r 13.2 hr 19.8 h	r 13.6 hr	19.8 hr	26.4 hr
Ethernet							icksonville) Jacksonville)	AC adapter			ficantly with setting e-C AC adapter	s, usage, & oth	er factors	
WLAN +								h 4.1, M.2 card	Preload	Windows®	10 Home 6	4 or Windows 10	Pro 64		
Bluetooth™				BT4.2 but is				,	Limited warranty			figurable by model:			
WWAN (optional)	 Integrate 	d Mob	ile Broad	rable by mod dband 4G L com L830-F	TE,			ptane memory):		• 3-year/1-		service depot repair servi imited onsite ser			
	 Integrate 	d Mob	oile Èroac	dband 4G L	TÉ-A.	`	• • • • • • • • • • • • • • • • • • • •		Mil-Spec test	MIL-STD-810G military testing					
SIM card (opt)	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable Nano-SIM card slot, optional Verizon LTE (US) SIM card								Environment	EPEAT™ C	Gold (US on	nly); ENERGY ST	AR® 6.1; RoH	S-compliant	



ThinkPad T480s Platform Specifications

Processor	7th Generation I	ntel® Cor	e™ i5 Proc	essor				Dimensions	<i>WxDxH</i> : 13.03" x 8.93" x 0.73"; 331mm x 226.8mm x 18.45mm					
	Processor # of	# of	Base	Max Turbo	Cache	Memory	Processor		Starting at 2.9 lb (1.32kg) Black or Silver					
		Threads	Frequency	Frequency	requency	Types	Graphics	Case material	Display cover: CFRP Hybrid;					
	i5-7200U i5-7300U 2	4	2.5 GHz 2.6 GHz		3MB 3MB	DDR4-2133	Intel HD Graphics 620	Concept could read	Bottom: Magnesium r Optional: Smart card reader					
	or 8th Generatio	n Intel C	ore i5 / i7 P	rocessor				Media reader	4-in-1 reader (MMC, SD, SDHC, SDXC)					
	Processor # of Number Cores	# of Threads	Base Frequency	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),					
	i5-8250U i5-8350U i7-8550U i7-8650U	8	1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.6 GHz 4.0 GHz	6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole					
Graphics	Intel HD Graphic Intel UHD Graph 2GB GDDR5 me	nics 620 i	n processo	r and NVIDI	A® G॑e	Force® MX	150,	Monitor cable (optional)	* Depending on many factors, actual data transfer speed may be lower than theoretical speed USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter					
	supports externa supports three in Max resolution:	al digitàl i ndepende 4096x23	monitor via ent displays 04@60Hz	HDMI or US ;; (USB Type-0	В Тур	e-C;	,,	Camera Audio support	One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec /					
Chipset Memory	Intel SoC (Syste 20GB or 24GB r 4GB or 8GB me	max / 240 mory sol	ÖMHz DDF dered to sy	R4, dual-cha stemboard,	one D	DR4 SO-DI	MM socket		stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack					
Display	* System clocks do Some: 14.0" (35						nt IDS	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad					
	250 nits, supports Some: 14.0" (35	16:9 asp ThinkPa 55mm) W 16:9 asp ving angl	ect ratio, 70 d Privacy G QHD (2560 ect ratio, 70 e	00:1 contras Guard on sor Ix1440), anti 00:1 contras	t ratio, ne mo -glare t ratio,	170° viewi dels , LED backl 72% gamu	ng angle, light, IPS,	Security Security chip vPro (optional) Fingerprint reade NFC (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 palm rest, anti-spoofing technology Near Field Communication					
Storage	One of the followin	• •						Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (0-80% in 60 mins					
Optane™ memory	 M.2 SSD / SAT M.2 SSD / PCI 			4, 32Gb/s				Max battery life	65W USB Type-C AC adapter MobileMark® 2014: 15.6 hr * Battery life varies significantly with settings, usage, & other factors					
Optical	None							AC adapter	45W or 65W USB Type-C AC adapter					
Ethernet	Non-vPro model								Windows® 10 Home 64 or Windows 10 Pro 64					
WLAN + Bluetooth™	vPro model: Intel Dual Band v * Intel 8265ac card	Wireless-	AC 8265, V		2.11ac	+ Bluetoot	/	Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service					
WWAN (optional)	One of the followin			lel:				1	3-year/1-yr battery limited onsite service					
	Wireless WAN Integrated Met			TE				Mil-Spec test	MIL-STD-810G military testing					
211. 17. 3	 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 							Environment	EPEAT™ Silver; ENERGY STAR® 6.1; RoHS-compliant					
SIM card (opt) Note: The specifica	Nano-SIM card				iivi ca	ra			Leno					



ThinkPad T490 Platform Specifications

Processor	8th Ge	neration I	Intel® C	ore™	i5 / i7 Pr	ocessor					Dimensions	WxDxH:	12.95" x 8.9	94" x 0).70"; 329mm x 22	7mm x	17.9mn	n
	Proces		# of			Max Turbo	ache	Memory	Proces		Weight	Models	FHD		FHD Low Power / W			
	Numbe		Thread	-		riequency		Types	Graph	iics		Weight	3.41 lb / 1.55	5 kg	3.23 lb / 1.46 kg	9		
	i5-8265						SMB				Case color Case material	Black	over: PPS/5	E00/ C	г.			
	i5-8365	4	8				BMB C	DR4-2400 In	tel UHD (620		Case material	Bottom:	PA / 50		Γ,			
	i7-8665						BMB		020	,	Smart card reade							
0			-: 000				JIVID				Media reader	MicroSD (card reader					
Graphics	Intel U	HD Graph HD Graph	nics 620 nics 620) in p) in p	rocessor	only or and					Ports	Two USB	3.1 Gen 1 (or	ne Alw	ays On), with the function of I	Dower F) olivorv	and Diaplay Port)
	NVIDIA	A® GeFord	ce® MX	250, 1	2GB GDI	DR5 memor						one USB	3.1 Type-C G	en 2 /	Thunderbolt 3 (with	the fun	ction of	PD and DP).
		rts externa rts three i				IDMI or Thu	nderbo	olt;				HDMI 1.4	b. Ethernet (F	RJ-45)	. nano-SIM card slo	t (WWA	N mode	els).
						Thunderbolt	: 4096	6x2160@24H	Hz (HDN	(II)		headphor	ne / micropho	ne cor	nbo jack, optional sr	nart car	rd reade	er,
		oC (Syste					,		(,	1	* Dependin	ig on many fact	tors, ac	ocking connector, se tual data transfer spee	d may be	eynole e lower th	han theoretical speed
Memory	48GB	max / 240	00MHz I	DĎŔ4	4, dual-ch	nannel capa					Monitor cable (optional)				MI to VGA Monitor A			
	8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM soc * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation										(Optional)	USB-C to	HDMI: Lenov	vo USI vo USI	B-C to VGA Adapter B-C to HDMI Adapte	er		
Display											1	USB-C to			B-C to DisplayPort A			
Display	Size F	Resolution		Type	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle		None						
	14.0" F	ID (1366x7	(68)	TN	Anti-glare	220 nits	16:9	400:1	45%	90°	Camera (optional)	One of the	following, confi	figurable	e by model: Shuttor comore priv	oov five	nd foour	
						250 nits]	• IR came	era and HD72	i i i iiiik 20p cai	Shutter camera priv mera with ThinkShu	acy, lixe	era priv	vacv. fixed focus
	14.0" F	HD (1920x	(1080)	IPS	Anti-glare	(non-touch) 300 nits	16:9	700:1	45%	170°	Audio support	HD Audio	. Realtek® AL	_C3287	7 codec /			,,
						(multi-touch)						stereo spe	eakers, 2W x	2, Dol	by® Audio™ Premiu ne, headphone / mic	m / rophone	a comb	o jack
	14.0" F	HD (1920x .ow Power	(1080)	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	 Kevboard			_ •	dia Fn keys, option			,
	F	HD (1920x							1		UltraNav™	TrackPoin	t® pointing de	evice a	nd buttonless Mylar	surface	multi-te	ouch touchpad
		'hink̀Pad Pı Buard	rivacy	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Security				k password, superv	isor pas	sword,	security keyhole
	V	VQHD (256	S0x1440)						100%		Security chip System Mgt (opt)	Discrete T	PM 2.0, TCC	G Certi	fied			
	14.0" F	IDR, Dolby	Vision™	IPS	Glossy	500 nits	16:9	1500:1	Adobe	170°	Fingerprint reade	nnei veio r <i>Optional</i> :	Touch style r	match	on chip fingerprint r	eader o	n the pa	alm rest
Multi-touch (opt)	On-cel	I touch, s	upports	10-fi	inger ges	ture (FHD o	nly)						d Communica					
		2280 SSE									Battery				ry, supports Rapid C	harge (charge	up to 80% in 1hr)
		2280 SSE 2242 SSE									Max battery life		rk® 2014: 16		r with settings, usage, &	other fac	ctors	
						olid State St	orage.				AC adapter		5W USB Type			011707 740		
	M.2	2280, PC					0 /				Preload	Windows	10 Home 64	4 or Wi	ndows 10 Pro 64			
Optical	None					1, 1010					Limited warranty		following, confi					
Ethernet						ection I219-							depot repair s I-vr batterv de					
WLAN (optional)	vPro model: Intel Ethernet Connection I219-LM (Jacksonville) Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0										-				onsite service			
Bluetooth™ (opt)	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter										Mil-Spec test		810G military					
WWAN (optional)	One of	One of the following, configurable by model:									Environment			,	™ FAR® 7.1; RoHS-con	npliant		
		less WAN				E Eibooom	1 020 1	=D M 0 00 00	. /ENAE ^	only)			,·		,			
	IntegInteg	rated Mol	bile Bro	auba adba	ind 4G LI ind 4G IT	E, FIDOCOM	∟୪୪∪-I m L85	EB, M.2 card 0-GL, M.2 ca	ı(⊏ıvı⊏A ard	only)								
	 Inted 	rated Mol	bile Bro	adba	ind 4G LT	E-A. Fiboco	m L86	0-GL. MIMO	4x4, M.	2 card								
SIM card (opt)	* For no	on-WWAN I SIM card	model, it	mear	ns the mod I Verizon	lel is NOT WV LTE (US) SI	VAN upo M. caro	gradable I										
Note: The specifica							our	•										Lenove











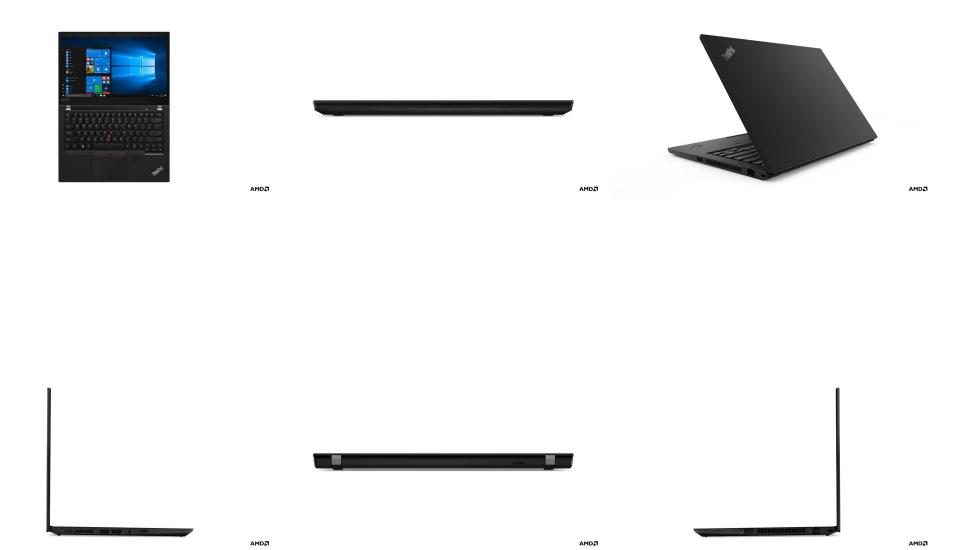






ThinkPad T490s Platform Specifications

Processor	8th Gener	-									Dimensions	WxDxH (I	black with FHD / F	<i>Privacy Guard):</i> 3.90" x 0.66": 329.0mm x 2	106 15mm v 16 7mm		
	Processor Number	# of	# of Threads	Bas		ax Turbo equency Cac		emory ypes	Proce: Graph			WxDxH (I		3.90" x 0.66"; 329.0mm x 2 ow Power / WQHD):	26.15mm x 16.7mm		
	i5-8265U	Coles	Tilleaus	1.6 G		.9 GHz 6M	_	ypes	Giapi	IIICS	1	, ,		3.89" x 0.63"; 328.8mm x 2			
	i5-8365U	4	8	1.6 G		.1 GHz 6M		lr	ntel UHD	Graphics	Weight	WXDXH (<i>silver):</i> 12.96" x 8	3.92" x 0.68"; 329.15mm x	226.45mm x 17.2mm		
	i7-8565U	4	8	1.8 G		.6 GHz 8M	В	R4-2400 "	620	0	Worgin	Models	Black with FHD	Black with FHD Low Power / WQHD / Privacy Guard	Silver		
	i7-8665U			1.9 G	iHz 4	.8 GHz 8M	В					Weight	2.98 lb / 1.35 kg	2.81 lb / 1.27 kg	3.29 lb / 1.49 kg		
Graphics	supports t	externa hree in	ıl digital ı	monitor ent disr	r via ÁE olavs:	OMI or Thund		160@24	Hz (HDN	MI)	Case color Case material Smart card reade	Bottom:	over: CFRP Hybr Magnesium		er);		
Chipset Memory	Intel SoC 8GB, 16G	Intel SoC (System on Chip) platform 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no soc * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation									Media reader Ports	MicroSD Two USB one USB	card reader 3.1 Gen 1 (one A 3.1 Type-C Gen 1	lways On), (with the function of Power	Delivery and DisplayPor		
Display	Size Resolution Type Surface Brightness Aspect Ratio Color Ratio Gam									Viewing Angle		one USB 3.1 Type-C Gen 2 Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models headphone / microphone combo jack, optional smart card reader.					
	14.0" FHD	(1920x1	1080)	IPS An	nti-glare	250 nits (non-touch) 300 nits (multi-touch)	16:9	700:1	45%	170°	Monitor cable	microSD * Dependir HDMI to \	card reader, side on many factors, a NGA: Lenovo H	docking connector, security actual data transfer speed may b DMI to VGA Monitor Adapte	keyhole be lower than theoretical spe		
	14.0" FHD Low I	(1920x1 Power	1080)	IPS An	nti-glare	400 nits	16:9	800:1	72%	170°	(optional) Bundled Accy	USB-C to	DP: Lenovo U	SB-C to VGA Adapter SB-C to DisplayPort Adapte et Extension Adapter Gen 2	r		
	14.0" FHD Think Guar		1080) vacy	IPS An	nti-glare	400 nits	16:9	1000:1	72%	170°	Camera	One of the	following, configural	•			
	14.0" WQH HDR,	ID (2560 , Dolby \	0x1440) Vision™	IPS G	Blossy	500 nits	16:9	1500:1	100% Adobe	170°	Audio support	IR came HD Audio	era and HD720p c , Realtek® ALC32	amera with ThinkShutter ca 87 codec /			
Multi-touch (opt)	On-cell to	uch, su	pports 1	10-finge	er gestu	re (FHD only	/)					dual array	eakers, 1 W X 2, D / far-field microph	olby® Audio™ Premium / one, headphone / microphor	ne combo jack		
	M.2 228M.2 228M.2 224	80 SSD	/ PCIe I	NVMe,	PCIe 3						Keyboard UltraNav™	6-row, spi	ill-resistant, multin	nedia Fn keys, optional LED and buttonless Mylar surfac	backlight		
		tane™	Memory	H10 w	ith Soli	d State Stora	age,				Security Security chip	Discrete 7	ΓPM 2.0, TCG Cei	isk password, supervisor pa tified	assword, security keyhole		
Optical Ethernet	None Native Inte	el Ethe	rnet Cor	nection	n I219-\	I (Non-vPro	or I21	9-I M (vP	(ro)		System Mgt (opt) Fingerprint reade	r Optional:	Touch style matc	h on chip fingerprint reader	on the palm rest		
Linemet	via bundle	ed or op	otional T	hinkPa	d Ether	net Extensio	n Adap	ter Gen 2	2		NFČ (optional)		d Communication		/		
WLAN +	One of the										Battery Max battery life	Integrated MobileMa	d Li-ion 57Wh batt a <i>rk® 2014:</i> 20 hr	ery, supports Rapid Charge	(charge up to 80% in 1r		
						2.11ac + Blue ax + Bluetoo		5.0			,	* Battery I	ife varies significantl	with settings, usage, & other fa	actors		
(optional) WWAN (optional)		-	,			ax + Diuetoc	Jul 5.U				AC adapter		5W USB Type-C A	<u> </u>			
vvvvAiv (optioriai)	Wireless	S WAN	uparada	ıble ıble	mouel.						Preload			Vindows 10 Pro 64			
SIM card (opt)	 Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, 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 								d (EMEA ard	A only)	Limited warranty	1-year of3-year/13-year/1	following, configural depot repair servic 1-yr battery depot 1-yr battery limited	e repair service I onsite service			
	. ,										Mil-Spec test	MIL-STD	-810G military test	ting			
											Environment	EPEAT™	Silver: ENERGY S	STAR® 7.1: RoHS-compliant			



ThinkPad T495 Platform Specifications

Processor	AMD Ry	/zen™ PF	RO Mobil	le Pr	ocessors	with Rade	eon™ Ve	ga Graphics	3		Dimensions	WxDxH:	12.95" x 8.94" :	x 0.70"; 329mm	x 227mm x 17.9mm
	Processo		_ # of			1ax Turbo	Cache	Memory		essor	Weight	Models	HD	FHD	FHD Low Power
	Number		Threads	Frec	quency Fi	requency	2MB L2 /	Controller		phics		Weight	3.46 lb / 1.57 kg	3.46 lb / 1.57 kg	3.39 lb / 1.54 kg
	Ryzen 3 Pro 3300)U 4	4	2.1	GHz 3	3.5 GHz	4MB L3		Gra	n Vega 6 phics	Case color Case material		over: PPS / 50%		
	Ryzen 5 Pro 3500		8	2.1	GHz 3		MB L2 / 4MB L3	DDR4-2400		n Vega 8 phics	Smart card reade	Bottom:	PA / 50% G	**	
	Ryzen 7 Pro 3700		8	2.3	GHz 4		MB L2 / 4MB L3			Vega 10 phics	Media reader Ports	MicroSD One USB	card reader 3.1 Gen 1 (Alwa	ys On), one USB 3	
Graphics	support	s externa s four inc	aľ digital depende	mon nt di	itor via U splays;	JSB-C or F	IDMI;	orocessor; 60@60Hz (F	HDMI)			HDMI 2.0 headphor microSD	, Ethernet (RJ-45 ne / microphone c card reader, side	i), nano-SIM card : combo jack, option docking connecto	of Power Delivery and DisplayPort), slot (WWAN models), al smart card reader, r, security keyhole speed may be lower than theoretical speed
Chipset Memory	AMD SoC (System on Chip) platform 32GB max / 2400MHz DDR4, dual-channel capable, 8GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM soc * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation									ket	Monitor cable (optional) Bundled Accy	HDMI to V USB-C to USB-C to None	VGA: Lenovo F VGA: Lenovo U DP: Lenovo U	IDMI to VGA Monit ISB-C to VGA Ada ISB-C to DisplayPo	tor Adapter pter
Display	Size Resolution Tupe Surface Printtness Aspect Contrast Color									Viewing t Angle	Camera (optional				privacy, fixed focus
	14.0" HE	(1366x7	68)	TN	Anti-glare	220 nits	16:9	400:1	45%	90°] _^	• IR came	era and HD720p	camera with Think	Shutter camera privacy, fixed focus
	14.0" FH	D (1920x	1080)	IPS	Anti-glare	250 nits (non-touch 300 nits (multi-touch	10.9	700:1	45%	170°	Audio support	stereo sp dual array	/ far-field microph	Oolby® Audio™ Pre one, headphone /	microphone combo jack
		D (1920x w Power	1080)	IPS	Anti-glare	ľ	16:9	800:1	72%	170°	- Keyboard UltraNav™	6-row, spi TrackPoin	ll-resistant, multir It® pointing device	nedia Fn keys, op and buttonless M	tional LED backlight ylar surface multi-touch touchpad
Multi-touch (opt)	On-cell	touch, sı	upports '	10-fir	nger gest	ture (FHD	only)				Security Security chip		password, hard of PM 2.0. TCG Ce		pervisor password, security keyhole
Storage		280 SSD	/ PCle	NVM	Sb/s le, PCle le. PCle		•				System Mgt	DASH Ma	anagement		int reader on the palm rest
Optical	None										Battery	Integrated	d Li-ion 50Wh bat	terv. supports Rar	oid Charge (charge up to 80% in 1hr)
Ethernet	Realtek	® RTL81	11 Gigal	bit Et	thernet c	onnection					Max battery life	MobileMa	ark® 2014: 13.4 h	nr ´ ''	,
WLAN Bluetooth™						2.11ac + B Vi-Fi + Blu		n 5.0 combo adap	ter		AC adapter		ite varies significant 5W USB Type-C	<i>ly with settings, usag</i> AC adapter	ie, & otner factors
WWAN (optional)	_										Preload	Windows	10 Home 64 or	Windows 10 Pro 6	4
, , ,	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							gradable	ard		Limited warranty	• 1-year o	following, configura depot repair servi 1-yr battery depot	ce	
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card							Mil-Spec test	test MIL-STD-810G military testing						
											Environment	EPEΔT ™	Silver: ENERGY	STAR® 7.1; RoHS	compliant

July 2019





AMD.

AMD.



ThinkPad T495s Platform Specifications

Processor	AMD Ryze	en [™] PF	O Mobi	ile Pr	ocessors	with Rad	eon [™] Ve	ga Graphics	5		Dimensions	WxDxH (I	FHD / Privacy G			
	Processor Number		# of			lax Turbo	Cache	Memory Controller	Proce			WxDxH (12.95" x "Low Power):	(8.90" x 0.66"; 329.0mn	n x 226.15mm x 16.7mm	
	Ryzen 5		Threads		` '	requency	MB L2 /	Controller	Grap Radeon			WADAIT (I		x 8.89" x 0.63"; 328.8mn	n x 225.8mm x 16.1mm	
	Pro 3500U	4	8	2.1	GHz :	3.7 GHZ	IMB L3	DDR4-2400	Grap		Weight	Models	FHD	FHD Low Power	FHD Privacy Guard	
	Ryzen 7 Pro 3700U	4	8	2.3	GHz 4		MB L2 / IMB L3	DDN4-2400	Radeon \Grap	/ega 10	Coop color	Weight	2.92 lb / 1.33 kg	2.76 lb / 1.25 kg	2.89 lb / 1.31 kg	
				<u> </u>					Стар	IIICS	Case color Case material	Black Display c	over: CFRP Hvb	orid:		
Graphics	AMD Rad supports to supports to	externa	aĬ diaital	∣mŏn	itor via Ċ						Smart card reade	Bottom:	Magnesiu	m/Aluminum		
	Max resol	ution:	4096x2	304@	960Hz (L	JSB-C); 4	096x216	60@24Hz (H	HDMI)		Media reader	MicroSD	card reader			
Chipset	AMD SoC										Ports	One USB	3.1 Gen 1 (Alwa 3.1 Type-C Gen	ays On), one USB 3.1 Ge 2 (with the function of Po	n 2, wer Delivery and DisplayPort	
Memory	8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to AMD limitation											HDMI 2.0 headphor), Ethernet extensine / microphone	sion connector, nano-SIN combo jack, optional sma	I card slot (WWAN models), art card reader,	
Display	Size Reso	olution		Туре	Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Monitor cable	* Dependir	ng on many factors,	e docking connector, secu , actual data transfer speed i HDMI to VGA Monitor Ad	naý be Íower than theoretical spe	
	14.0" FHD	(1920x	1080)	IPS	Anti-glare	300 mis	16:9	700:1	45%	170°	(optional) Bundled Accy	USB-C to Optional:	VGA: Lenovo l ThinkPad Ether	USB-C to VGA Adapter net Extension Adapter G	- 1	
	14.0" FHD	(1920x Power	1080)	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	- Camera	Optional: ThinkPad Ethernet Extension Adapter Gen 2 One of the following, configurable by model: HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed foc				
	FHD 14.0" Think Guar			IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	Audio support	HD Audio	o, Realtek® ALC3 eakers, 1W x 2,			
Multi-touch (opt)	On-cell to	uch, sı	pports	10-fir	nger ges	ture (FHD	only)				Kevboard		'		· · · · · · · · · · · · · · · · · · ·	
Storage	M.2 2280	SSD /	PCIe N	VMe,	, PCIe 3.	0 x 4					UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpa				
Optical Ethernet	None	- I (Table -	1 0 -		# 1010	V / N = =	Dua\ a	219-LM (<i>vF</i>)\		Security Security chip		password, hard TPM 2.0, TCG C		or password, security keyhole	
Ememer	via bundle	ei Eirie	otional 7	Think	Pad Ethe	rnet Exte	nsion Ac	apter Gen 2	70) 2		System Mgt	DASH Ma	anagement			
WLAN <i>(optional)</i> Bluetooth™	Intel Wirel Bluetooth							5.0 ombo adapt	er		NFČ	None		tch on chip fingerprint rea	·	
WWAN (optional)	Wireless WAN upgradable						Battery Max battery life	MobileMa	ark® 2014: 16.4	hr	arge (charge up to 80% in 1h					
	 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 				 Integrated Mobile Broadband 4G LTE-A. Fibocom L850-GL. M.2 card 				AC adapter	* Battery II	ife varies significan 5W USB Type-C	ntly with settings, usage, & ot AC adapter	her factors			
SIM card (opt)					* For non-WWAN model, it means the model is NOT WWAN upgradable						Preload			Windows 10 Pro 64		
	Nano-SIM card slot, optional Verizon LTE (US) SIM card								Limited warranty	• 1-year o	following, configur depot repair serv	rice				
											Mil-Spec test		1-yr battery depo -810G military te			
											Environment			String STAR® 7.1; RoHS-comp	liont	









ThinkPad T580 Platform Specifications

Number Cores Threads Frequency Frequency Cacre 15-7200U 2 4 2.5 GHz 3.1 GHz 3MB Discrete 3.5 GHz 3.5 GHz 3MB Discrete 3.5 GHz 3.5 GHz 3MB Discrete 3.5 GHz 3MB Discrete 3.5 GHz 3MB Discrete 3.5 GHz 3.5 GHz 3MB Discrete 3.5 GHz	Memory Types	Processor Graphics Intel HD Graphics 620 Processor Graphics	Weight Case color Case material Smart card reade	Integrated model: starting at 4.29 lb / 1.95 kg; Discrete model: starting at 4.39 lb / 1.99 kg Black Display cover: Glass-Fiber Reinforced Plastic (PPS); Bottom: Glass-Fiber Reinforced Plastic			
15-7200U 2 4 2.5 GHz 3.1 GHz 3MB D	DDR4-2133 In Memory Types	ntel HD Graphics 620 Processor	Case material Smart card reade	Black Display cover: Glass-Fiber Reinforced Plastic (PPS); Bottom: Glass-Fiber Reinforced Plastic			
i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB D or 8th Generation Intel Core i5 / i7 Processor Processor # of Number Cores Threads Frequency Frequency Frequency Frequency Threads Threads	Memory Types	620 Processor	Smart card reade	Bottom: Glass-Fiber Reinforced Plastic `			
Processor # of # of Base Frequency Frequency Cache	Types			*Ontional Count and reader			
Number Cores Threads Frequency Frequency i5-8250U 1.6 GHz 3.4 GHz 6MB	Types						
		Grapriics	Media reader Ports	4-in-1 reader (MMC, SD, SDHC, SDXC) Two USB 3.1 Gen 1 (one Always On), Two USB 3.1 Gen 2 (one Always On), Two USB 3.1 Gen 3 (one Always On), Two USB 3.1 Gen 4 (with the function of Payer Politicary and Pioplay Part)			
i5-8350U 4 8 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 8MB DI	DR4-2400 Int	tel UHD Graphics 620		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, 4-in-1 reader (MMC, SD, SDHC, SDXC), side docking connector, security keyhole			
Graphics Intel HD Graphics 620 or Intel UHD Graphics 620 in proc Intel HD Graphics 620 or Intel UHD Graphics 620 in proc NVIDIA® GeForce® MX150, 2GB GDDR5 memory;		or	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;		Camera (optional)	al) One of the following, configurable by model:			
supports three independent displays; Max resolution: 4096x2304@60Hz (USB Type-C); 4096	6x2160@30H	Hz (HDMI)	Audio support	 HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec / 			
Chipset Intel SoC (System on Chip) platform Memory 32GB max / 2400MHz DDR4, dual-channel capable, two * System clocks down for processors with lower memory controll	o DDR4 SO- ller	DIMM sockets		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack			
Display Some: 15.6" (396mm) FHD (1920x1080), anti-glare, LEI 250 nits, 16:9 aspect ratio, 700:1 contrast ratio, 1	170° viewing	ı angle	Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Some: 15.6" (396mm) UHD (3840x2160), anti-glare, LE 16:9 aspect ratio, 1000:1 contrast ratio, 72% gam Multi-touch (opt) On-cell touch, supports 10-finger gesture (FHD only)			Security Security chip	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 st	torage			Intel vPro Technology er <i>Optional:</i> Touch style match on chip fingerprint reader on the palm rest,			
Some: HDD / SATA 6.0Gb/s, 2.5" wide, 7mm high, Activ Some: SSD / SATA 6.0Gb/s, 2.5" wide, 7mm high (e.g. 3	ve Protection	n System™	NFC (optional)	anti-spoofing technology Near Field Communication			
Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16Gb/s Some: 128GB M.2 SSD / PCIe NVMe, PCIe 3.0 x 2, 16			Battery	Optional integrated Li-ion 32Wh battery and external Li-ion 24Wh, 48Wh, or 72Wh battery			
in WWAN slot as 2nd Storage, mutually exclusive Optane™ memory <i>Optional:</i> Intel Optane memory, PCle NVMe, PCle 3.0 x Optical None	ve with WWA < 2	١N	Max battery life (MobileMark® 2014)	Models 24Wh 48Wh 72Wh 32Wh + 24Wh 32Wh + 48Wh 32Wh + 72Wh 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 (Jack vPro model: Intel Ethernet Connection I219-LM (Jack			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter			
WLAN + Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac +	,	1.1 M.2 oord	Preload	Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™ * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Win	ndows OS	+. 1, IVI.Z Calu	Limited warranty	One of the following, configurable by model:			
WWAN (optional) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE,	A amb ()			 1-year depot 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 • Integrated Mobile Broadband 4G LTE-A.	A only)		Mil-Spec test	MIL-STD-810G military testing			
Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upg SIM card (opt) 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 Gener	ration I	ntel® Cor	e™ i5 /	/ i7 Prod	cessor						Dimensions	<i>WxDxH:</i> 14.40" x 9.76" x 0.75"; 365.8mm x 248mm x 19.1mm
	Processor		_ # of	Bas		ax Turbo	Cache	Memory		Processo		Weight Case color	FHD model: 3.87 lb / 1.75 kg; UHD model: 3.86 lb / 1.75 kg Black
	Number	Cores	Threads			equency		Types	<u> </u>	Graphic	S	Case material	Display cover: PPS / 50% GF;
	i5-8265U i5-8365U	-		1.6 G		3.9 GHz	6MB 6MB		l				Bottom: PA / 50% GF
	i7-8565U	4	8	1.8 G		I.1 GHz I.6 GHz	8MB	DDR4-2400	Inter	UHD Gra 620	apnics	Smart card reader	Optional: Smart card reader
	i7-8665U	1		1.9 G		1.8 GHz	8MB			020		Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On),
	Intel UHD Intel UHD NVIDIA® (supports of supports of Max resol	ID Graphics 620 in processor only or ID Graphics 620 in processor and Garphics external digital monitor via HDMI or Thunderbolt; Sthree independent displays; Colution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI) Columbic (System on Chip) platform								(HDMI)		- Monitor cable	one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet (RJ-45), nano-SIM card slot (WWAN models), headphone / microphone combo jack, optional smart card reader, microSD card reader, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
Chipset	Intel SoC	(Syste	m on Ch	p) plat	form							(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter (NOT available in EMEA)
Memory		GB max / 2400MHz DDR4, dual-channel capable, GB or 16GB memory soldered to systemboard, one DDR4 SO-DIMM s										Dundled Assu	USB-C to DP: Lenovo USB-C to DisplayPort Adapter (NOT available in EMEA)
								ue to Intel lin				Bundled Accy	None One of the following, configurable by model:
Display	o: p		1_		, 1	5	Aspec	t Contras	t C	Color Vi	ewina	Camera (<i>optional)</i> 	HD720p camera with ThinkShutter camera privacy, fixed focus
	Size Reso	olution	l l	ype S	urface	Brightness	Ratio	Ratio	Gá	amut A	ngle		 IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	15.6" FHD	`	<u> </u>	PS An	nti-glare	250 nits	16:9	700:1			70°	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Premium /
	15.6" UHD HDR	(3840x	(2160) Vision™ I	PS An	nti-glare	500 nits	16:9	1200:1	10 Ac	00%	70°		dual array far-field microphone, headphone / microphone combo jack
Multi-touch (opt)	On-cell to			0-finge	er gestu	ire (FHD	only)		17.50	4000		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, numeric keypad, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
<u> </u>		30 SSD 12 SSD tane™	/ PCIe N / PCIe N	IVMe, IVMe, H10 w	PCIe 3 PCIe 3 /ith Soli	.0 x 2	torage	,				Fingerprint reader	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology Optional: Touch style match on chip fingerprint reader on the palm rest Near Field Communication
Optical	None											Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
	Non-vPro vPro mod							cksonville) acksonville				Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 14.98 hr (9.5 hr for UHD model with discrete graphics)
WLAN (optional) Bluetooth™	Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter								pter			AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WWAN (optional)	One of the	followin	g, configu	rable by	/ model:				•			Preload	Windows® 10 Home 64 or Windows 10 Pro 64
	WirelessIntegrateIntegrate* For non-V	Wireless WAN upgradable Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EN Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable lano-SIM card slot, optional Verizon LTE (US) SIM card										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
	Trano-Silvi card slot, optional verizon LTL (03) Silvi card												MIL-STD-810G military testing
Note: The enecified												Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant



ThinkPad X1 Carbon (5th Gen) Platform Specifications

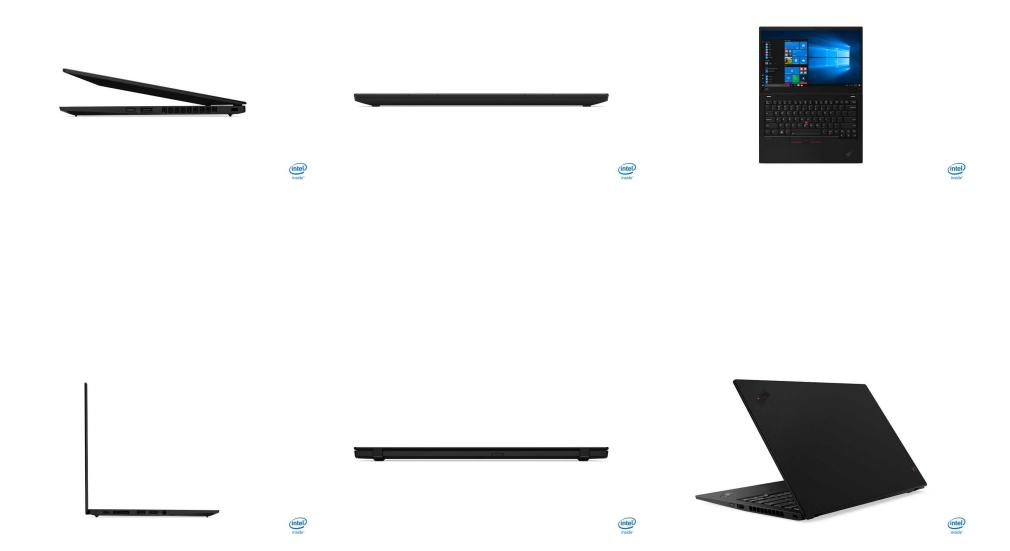
Processor	6th Generation I	ntel® Co	re™ i5 / i7	Processor	(EMEA	has only i5-630	0U and i7-6600U)	Smart card reade	
	Processor # of Number Cores i5-6200U	# of Threads	Base Frequency 2.3 GHz	Max Turbo Frequency 2.8 GHz		Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader, supports UHS-II microSD card Two USB 3.1 Gen 1 (USB 3.0, one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery
	i5-6300U i7-6500U i7-6600U	4	2.4 GHz 2.5 GHz 2.6 GHz	3.0 GHz 3.1 GHz 3.4 GHz	3MB 4MB 4MB	LPDDR3-1866	Intel HD Graphics 520	WiGig dock <i>(opt)</i> Monitor cable	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	or 7th Generatio	n Intel C	ore i5 / i7	Processor				(optional)	USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	Processor # of Number Cores	# of Threads	Base Frequency	Max Turbo Frequency		Memory Types	Processor Graphics	Bundled Accy Camera (optional)	Optional: ThinkPad Ethernet Extension Cable
	i5-7200U i5-7300U i7-7500U i7-7600U	4	2.5 GHz 2.6 GHz 2.7 GHz 2.8 GHz	3.1 GHz 3.5 GHz 3.5 GHz 3.9 GHz	3MB 3MB 4MB 4MB	LPDDR3-1866	Intel HD Graphics 620	Audio support	/ IR & 720p: IR camera and HD720p camera HD Audio, Conexant® CX11871 codec / stereo speakers, 2W x 2 / dual array microphone, combo audio/microphone jack
0		500			4IVID			Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad
Graphics	Intel HD Graphic supports externa supports three in Max resolution:	al digital ndepend 4096x23	monitor via ent display 304@60Hz	a HDMI or /s; z (USB Typ		•	4Hz (HDMI)		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
Chipset Memory	Intel SoC (Syste 8GB or 16GB / 1				l to sys	temboard, no s	sockets	NFC (optional)	Near Field Communication
Display	Some: 14.0" (3	, 16:9 as 55mm) V	pect ratio, VQHD (25	700:1 con 60x1440),	trast ra anti-gla	tio, 170° viewi	ng angle ight, IPS,	Battery Max battery life AC adapter	Integrated Li-Polymer 3-cell (57Wh) RapidCharge battery MobileMark® 2014: 15.5 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Multi-touch	None	, 10.5 as	peci railo,	700.1 0011	liasi ia	tio, 170 viewi	ig arigie	RapidCharge	AC adapter 45W USB-C 65W USB-C
Storage	One of the following • M.2 SSD / SAT	ΓΑ 6.0Gb	/s (e.a. xx	xGB SSD	M.2)	00.000.1	10 001 1041		Charge to 80%Not support1.0 hrCharge to 100%Not support2.5 hr
Optical	M.2 SSD / PCI None	ie nvilie	, PCIe 3.0	x 4, 32Gb	/s (e.g.	XXXGB SSD N	1.2 PCIe NVMe)	Preload	Windows® 7 Professional 64 preinstalled Some: Windows 10 Home 64 through downgrade rights in Some: Windows 10 Pro 64
Ethernet	Native Intel Ethe	ernet Cor ptional T	nnection I2 hinkPad E	219-V (<i>Nor</i> thernet Ex	n-vPro) tension	or I219-LM (<i>vi</i> n Cable	Pro)		 Windows 10 Pro 64 Lenovo Companion Lenovo Solution Center Lenovo Setting
WLAN Bluetooth™	One of the followin Intel Dual Band Intel Dual Band Intel Tri-Band M.2 card Bluetooth 4.1 wi	ng, configu d Wireles d Wireles Vireless- reless. ir	irable by moss-AC 8266 ss-AC 8265 AC 18265	odel (WiGig 0, Wi-Fi 2x 5, Wi-Fi 2x , WiGig 80 n Wi-Fi + E	can coe. 2 802.1 2 802.1 2.11ad	xist with WWAN) 1ac + BT4.1, 1ac + BT4.1, + Wi-Fi 2x2 80 th combo adap	M.2 card M.2 card 02.11ac + BT4.1, ter		 Lenovo PowerEngage ThinkVantage Product Recovery ThinkVantage System Update Adobe® Reader® Microsoft® Office preloaded; purchase a product key to activate McAfee® LiveSafe™ (30-day trial)
WWAN (optional) SIM card (opt)	* Intel 8265ac / 18265ac card support BT4.2 but is limited to BT4.1 by Windows OS Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTI (Sierra Wireless EM7455) Micro-SIM card slot, opt Verizon LTE (US) or Lenovo® Connect (EMEA) SIN WxDxH: 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm								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
Dimensions Weight	WxDxH: 12.79 Starting at 2.49	4" x 8.55	5" x 0.63";	323.5mn	n x 217	.1mm x 15.95ı	nm	Mil-Spec test	MIL-STD-810G military testing
Case color Case material	Black or Silver (s Display cover:	silver is N CFRP/G	NŎT availa	d;	ĒA)			Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
									Lenov



ThinkPad X1 Carbon (6th Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Dimensions	<i>WxDxH</i> : 12.74" x 8.55" x 0.63"; 323.5mm x 217.1mm x 15.95mm
	Processor # of # of Base Max Turbo Cache Memory Types Processor Graphics	Weight Case color	Starting at 2.49 lb / 1.13 kg Black or Silver (silver case is NOT available in EMEA)
	Intel HD Graphica	Casa material	Display cover: `CFRP/GFRP hybrid;
	15-73000 2 4 2.6 GHZ 3.5 GHZ 3MB LPDDR3-1866 620 620	Smart card reader	Bottom: magnesium alloy / PPS hybrid
	or 8th Generation Intel Core i5 / i7 Processor	Media reader	MicroSD card reader, supports UHS-II
	Processor # of Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics	Ports	Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b,
	1.6 GHz 3.4 GHz 6MB		Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader.
	i5-8350U	5	side docking connector, security keyhole
	i7-8650U 1.9 GHz 4.2 GHz 8MB	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
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor;	(optional)	USB-C to DP: Lenovo USB-C to DisplayPort Adapter
•	supports external digital monitor via HDMI or USB Type-C; supports three independent displays;	Bundled Accy	Optional: ThinkPad Ethernet Extension Ádapter Gen 2) One of the following, configurable by model:
	Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)	''	 HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset	Intel SoC (System on Chip) platform		IR camera and HD720p camera, fixed focus HD Audio. Realtek® ALC3286 codec /
Memory	8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets * System clocks down for processors with lower memory controller		stereo speakers, 1W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby® Atmos™ via headphones
Display	One of the following, configurable by model:	Kevboard	6-row, spill-resistant, multimedia Fn keys, LED backlight
	 14.0" (355mm) FHD (1920x1080), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle 	UltraNav™	TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad
	• 14.0" (355mm) WQHD (2560x1440), anti-glare, LED backlight, IPS, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle	Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0. TCG Certified
	• 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, glossy,	vPro (optional)	Intel vPro Technology
	LED backlight, IPS, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamul 170° viewing angle		rTouch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Multi-touch (opt)	On-cell touch, supports 10-finger gesture (FHD only)	NFC (optional)	Near Field Communication
Storage	One of the following, configurable by model: • M.2 SSD / SATA 6.0Gb/s (e.g. xxxGB SSD M.2)	Battery	Integrated Li-ion 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
_	 M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (é.g. xxxGB SSD M.2 PCIe NVMe) 		<i>MobileMark</i> [®] <i>2014:</i> 19.3 hr
Optane™ memory Optical	/ None None	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
Ethernet	Native Intel Ethernet Connection I219-V (Non-vPro) or I219-LM (vPro)	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
	via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2		One of the following, configurable by model:
WLAN + Bluetooth™	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS		1-year depot repair service3-year/1-yr battery depot repair service
WWAN (optional)	Integrated Mobile Broadband 4G LTE-A,		3-year/1-yr battery limited onsite service
	Intel XMM™ 7360 (Fibocom L850-GL), M.2 card * For non-WWAN model, it means the model is NOT WWAN upgradable	l	MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant
SIM card (opt)	Nano-SIM card slot, optional Verizon LTE (US) SIM card	Liviloriment	LELAT GOID (03 01119), EINEND T STAN 0.1, NON3-COMPINATE
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Lenovo April 2019



ThinkPad X1 Carbon (7th Gen) Platform Specifications

Processor	8th Generation Intel® C	ore™	[™] i5 / i7 Pro	ocessor					Dimensions	WxDxH: 12.74" x 8.55" x 0.59"; 323.5mm x 217.1mm x 14.9mm
	Processor # of # of Number Cores Thread	_	requency F	requency		emory Types		cessor phics	Weight Case color Case material	Starting at 2.4 lb / 1.09 kg Black paint or black weave Display cover: Carbon Fiber;
	i5-8265U i5-8365U i7-8565U i7-8665U	1	1.6 GHz 4	4.1 GHz 6 4.6 GHz 8	MB MB MB MB	PDDR3-2133		UHD nics 620	Smart card reade Media reader Ports	Bottom: magnesium alloy
Graphics	Intel UHD Graphics 620 supports external digital supports three independent Max resolution: 4096x2	ıl mo dent	nitor via Ĥ displays;		,,		,	MI)	- Monitor cable	(with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, side docking connector, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter
Chipset Memory	Intel SoC (System on C 8GB or 16GB / 2133MH			oldered to s	ysteml	ooard, no so	ockets		Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2 I) One of the following, configurable by model:
Display	Size Resolution	Туре	e Surface	Brightness	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	- Camera (Optional)	HD720p camera with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera with ThinkShutter camera privacy, fixed focus
	14.0" FHD (1920x1080) IPS Anti-glare 300 nits 16:9 700:1 72% 1							170°	Audio support	HD Audio, Realtek® ALC3286 codec / Dolby® Atmos™ speaker system, 2W x 2, 0.8 x 2 /
	14.0" FHD (1920x1080) Low Power	IPS	Anti-glare	400 nits	16:9	800:1	72%	170°	Keyboard	4 array far-field microphones, headphone / microphone combo jack 6-row, spill-resistant, multimedia Fn keys, LED backlight
	FHD (1920x1080) 14.0" ThinkPad Privacy Guard	IPS	Anti-glare	400 nits	16:9	1000:1	72%	170°	UltraNav™ Security	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad Power-on password, hard disk password, supervisor password, security keyhole
	14.0" WQHD (2560x1440)	IPS	Anti-glare	300 nits	16:9	700:1	72%	170°	Security chip	Discrete TPM 2.0, TCG Certified Intel vPro Technology
	UHD (3840x2160) HDR 400, Dolby Vision™	IPS	Glossy	500 nits	16:9	1400:1	90%	170°	Fingerprint reade	rTouch style match on chip fingerprint reader on the palm rest Near Field Communication
Multi-touch (opt)	Capacitive-type multi-to anti-reflection (AR), and	uch, i-sm	, supports udge coati	10-finger ge	esture ((FHD only),			Battery	Integrated Li-ion 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter
Storage	One of the following, config • M.2 2280 SSD / SATA	Á 6.0	Gb/s						Max battery life AC adapter	MobileMark® 2014: 18.3 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	 M.2 2280 SSD / PCIe Intel Optane™ Memor 				rogo				Preload	Windows® 10 Home 64 or Windows 10 Pro 64
Ontinal	M.2 2280, PCIe NVM • Intel Optane SSD, M.	é 3.0	0 x 4		0 /				Limited warranty	One of the following, configurable by model: 1-year depot repair service
Optical Ethernet	None Native Intel Ethernet Co	2000	otion IO10	V (Non vD)	(a) or 1	210 LM /v/D	(ro)		Mil Chantast	3-year/1-yr battery depot repair service NUL STD 9100 military to sting.
	via bundled or optional								Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
WLAN Bluetooth™	Intel Wireless-AC 9560 Bluetooth 5.0 wireless,	Wi-l	Fi 2x2 802 grated in W	.11ac + Blue /i-Fi + Bluet	etooth ooth co	5.0 ombo adapt	er			
WWAN (optional) SIM card (opt)	One of the following, config • Integrated Mobile Bro • Integrated Mobile Bro * For non-WWAN model, ii Nano-SIM card slot, op	adba adba mea	and 4G LTE and 4G LTE ans the mode	E-A, Fiboco E-A, Fiboco el is NOT WN	m L860 /AN upg	D-GL, MIMC gradable		1.2 card		
Note: The specific	ations above may not be a	vaila	ble in all re	aions.					•	Lenove

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

July 2019



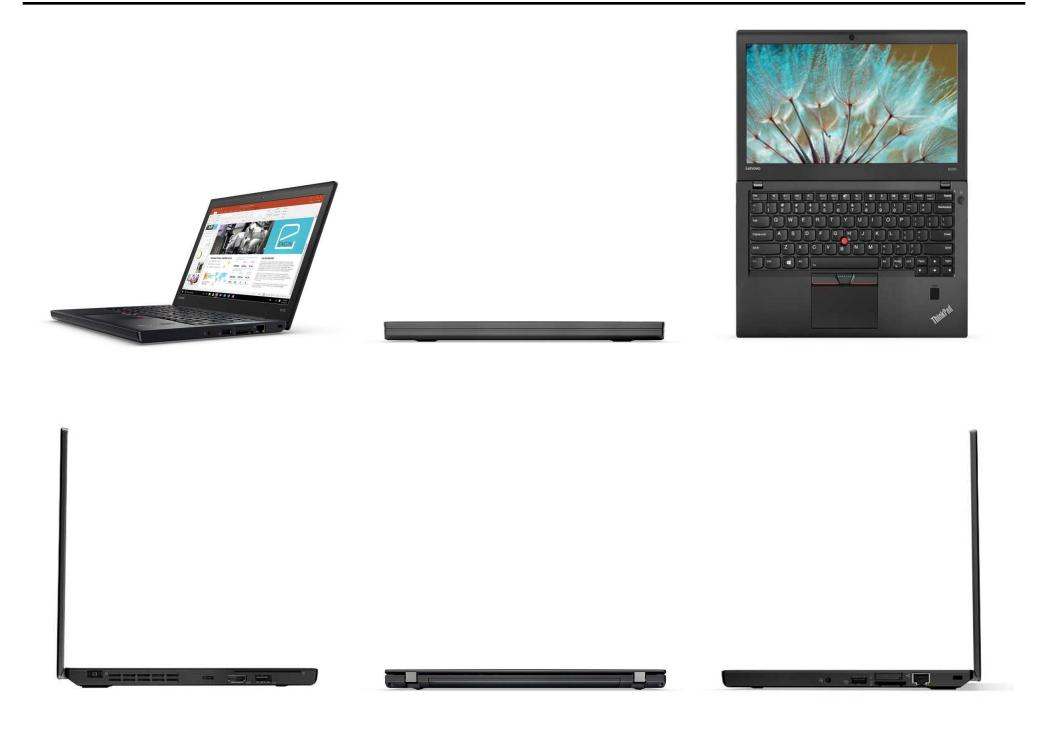






ThinkPad X1 Extreme Platform Specifications

Processor	8th Generation Intel® Core	e™ i5 / i7 Processor					r Optional: Smart card reader
	Processor # of # of Number Cores Threads	Base Max Turbo Frequency Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	SD Card reader (SD, SDHC, SDXC), supports UHS-II SD card Two USB 3.1 Gen 1 (one Always On),
	i5-8300H 4 8 i5-8400H 6 12	2.3 GHz 4.0 GHz 2.5 GHz 4.2 GHz 2.2 GHz 4.1 GHz	8MB 9MB	DDR4-2666	Intel LIHD Graphica		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
	i7-8850H	2.6 GHz 4.3 GHz	SIVID				* Power Delivery only supports power-out for charging peripherals * Depending on many factors, actual data transfer speed may be lower than theoretical speed
Graphics	Intel UHD Graphics 630 ir NVIDIA® GeForce® GTX 1 supports external digital n supports four independen	050 Ti Max-Q, 4GB (nonitor via HDMI or T t displays;	hunder	bolt™;		Monitor cable (optional) Bundled Accy	HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Cable One of the following, configurable by model:
	Max resolution: 5120X28	•	olt); 40	96x2160@	60Hz (HDMI)	Camera (<i>optional</i> ,	HD720p camera with ThinkShutter camera privacy, fixed focus
Chipset Memory	Mobile Intel CM246 Chips 64GB max / 2666MHz DD		pable, t	wo DDR4	SO-DIMM sockets	Audio support	IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3286 codec /
Display		ect ratio, 700:1 contr			ght, IPS,		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack, Dolby Atmos® headphone
	72% gamut, 170° Some: 15.6" (396mm) HI	DR 4K (3840x2160) v	vith Do	lby Vision™	, anti-glare,	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			i-touch, r gestur	anti-reflecte (4K only)	tion (AR)	Security Security chip vPro (optional)	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology
Storage	Up to 2 drives (two M.2 SSD) • M.2 SSD / SATA 6.0Gb/s	s (e.g. xxxGB SSD M			M O DOLO NIVAAO		rTouch style match on chip fingerprint reader on the keyboard bezel None None
Optane™ memory RAID <i>(optional)</i> Optical	M.2 SSD / PCIe NVMe, /None RAID 0/1 support None	POIE 3.0 x 4, 32Gb/s	s (e.g. x	XXGB 55D	M.2 PGIE NVME)	Battery Max battery life (MobileMark 2014) AC adapter	Integrated Li-ion 80Wh battery, supports Rapid Charge (charge up to 80% in 1hr) Discrete mode: 9.5 hr; Hybrid mode: 14.9 hr * Battery life varies significantly with settings, usage, & other factors 135W slim tip AC adapter
Ethernet	Native Intel Ethernet Convia bundled or optional Th				(vPro))	Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN Bluetooth™	Intel Wireless-AC 9560, W Bluetooth 5.0 wireless, int	/i-Fi 2x2 802.11ac + I	Bluetoo	th 5.0, M.2		Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN SIM card	None None						3-year/1-yr battery limited onsite service
Dimensions	WxDxH (non-touch): 14	.24" x 9.67" x 0.72";			7mm x 18.4mm	Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Gold (US only); ENERGY STAR® 7.0; RoHS-compliant
Weight	WxDxH (multi-ouch): 14 Non-touch model: starti Multi-touch model: starti	ng at 3.76 lb (1.7 kg)	;	smm x 245.	7mm x 18.7mm		
Case color Case material	Black Display cover: CFRP/GF Bottom: Aluminum	RP hybrid;					
Note: The enecified	ations above may not be avai	ilable in all regions					Lenovo



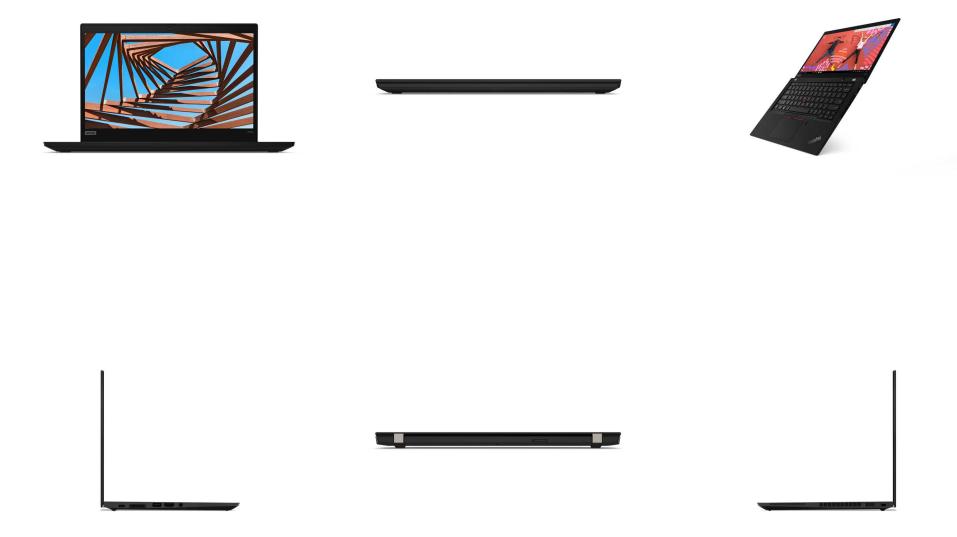
ThinkPad X270 Platform Specifications

Processor	6th Genera	ation Ir	ntel® Cor	e™ i3 / i5 / i	7 Processor			Dimensions	<i>WxDxH</i> : 12.	03" x 8.21" x 0.80"	; 305.5mm x 208.5m	ım x 20.3mm
	Processor	# of	# of	Base	May Turba	Memory	Processor	Weight	Models	No + 3-cell	3-cell + 3-cell	3 + 6-cell
	Number	-	Threads	Frequency	Frequency	Types	Graphics		Weight	2.79 lb / 1.27 kg	2.98 lb / 1.36 kg	3.33 lb / 1.52 kg
	i3-6006U			2.0 GHz	- 3N			Case color	Black			
	i3-6100U			2.3 GHz	- 3N			Case material		: Glass-Fiber Rei		
	i5-6200U	2	4	2.3 GHz	2.8 GHz 3N	— IDDB4-213	Intel HD Graphics		Bottom:	Glass-Fiber Rei	nforced Plastic	
	i5-6300U		-	2.4 GHz	3.0 GHz 3N	IB_	520	Smart card reade			001(0)	
	i7-6500U	ļ		2.5 GHz	3.1 GHz 4N			Media reader Ports		(MMC, SD, SDHC, Gen 1 (USB 3.0, c		
	i7-6600U			2.6 GHz	3.4 GHz 4N	IB		Ports				elivery and DisplayPort),
	or 7th Ger	neration	n Intel Co	ore i3 / i5 / i	7 Processor				HDMI 1.4b, Et	thernet (RJ-45), D	ock connector	
	Processor	# of	# of	Base	Max Turbo Car	he Memory	Processor					y be lower than theoretical speed
	Number	Cores	Threads		Frequency	Types	Graphics	WiGig dock (opt) Monitor cable	I hinkPad Wic	ig dock, mutually	exclusive with WWAN to VGA Monitor Adap	N (US only)
	i3-7100U	ļ		2.4 GHz	- 3N			(optional)		A: Lenovo USB-C		nei
	i5-7200U			2.5 GHz	3.1 GHz 3N		Intel HD Graphics	(Optional)	USB-C to DP.		to DisplayPort Adap	oter
	i5-7300U	2	4	2.6 GHz	3.5 GHz 3N		620	Camera (ontiona		lution, fixed focus		
	i7-7500U			2.7 GHz	3.5 GHz 4N			Audio support	HD Audio. Re	altek ALC3268 co	dec / stereo speakers	s. 1.5W x 2 /
	i7-7600U			2.8 GHz	3.9 GHz 4N	IB			dual array mic	crophone, combo a	udio/microphone jac	k
Graphics				620 in prod				Keyboard			Fn keys, optional LE	
					HDMI or USB	Type-C;		UltraNav™	TrackPoint® po	ointing device and	buttonless Mylar surf	face multi-touch touchpad
				ent displays	; USB Type-C);	4096x2160@	24Hz (HDMI)	Security	Power-on pas	sword, hard disk p	assword, supervisor	password, security keyhole
Chipset				p) platform	, ,,	-1000X2100@	ZHIZ (HDIVII)	Security chip	Discrete TPM	2.0, TCG Certified		
Memory					DR4 SO-DIMN	1 socket		vPro (optional)	Intel vPro Tec	nnology	chip fingerprint read	or on the nalm root
Momory					lower memory of			NFC (optional)	Near Field Co		chip inigerphini read	er on the paint rest
Display	Some: 12	2.5" (31	7.5mm)	HD (1366x	768), anti-glare	, LED backlig	aht,	Internal battery			i-Polymer 3-cell (23V	Vh)
-17	22	20 nits,	16:9 asp	ect ratio, 5	00:1 contrast r	atio	,	External battery		23Wh) or 6-cell <i>(48</i>		•,
					768), anti-glare			Max battery life	Models	No + 3-cell 3-ce	II + 3-cell 3-cell + 6-ce	ell 48Wh 3-cell + 6-cell 72Wh
					00:1 contrast r x1080), anti-gl			(MobileMark® 2014	Max battery life	e 6.52 hr 13	3.04 hr 20.1 h	nr 26.9 hr
					00:1 contrast r				* Battery life va	aries significantly with	settings, usage, & othe	er factors
Multi-touch (opt)					sture (FHD onl		9 a9.0	AC adapter	45W slim tip A	AC adapter or 45W	USB Type-C AC ada	apter
Storage	System has	one HL	DD slot or	one M.2 228	0 slot exclusively	/ for storage		Preload			installed <i>Some:</i> Win	
Ü					ide, 7mm high				through down Windows 10 F	grade rights in	Some: Win • Lenovo C	idows 10 Pro 64
					de, 7mm high		SSD)		Lenovo Solu		Lenovo C Lenovo S	
					e 3.0 x 2, 16Gl Gb/s, in WWAN		Storago		Lenovo Pow			: Office preloaded;
					AN and WiGig	siot as ziiu i	Siorage,		 ThinkVantag 	ge Product Recove	ery purchase	a product key to activate
Optical	None	araany	0,10,00,0		ar and record					ge System Update		
Ethernet	Non-vPro	model:	Intel Eth	nernet Conr	nection I219-V	(Jacksonville))	1	Adobe® Rea Microsoft® C	ader Office preloaded;		
	vPro mode				nection I219-LI					product key to acti	vate	
WLAN	One of the t	following	g, configui	rable by mod	el (WiGig is mutu	ially exclusive v	vith WWAN):	1		veSafe™ (30-day tr		
	 Realtek® 	RTL8	822BE, V	Vi-Fi 2x2 80	2.11ac + BT4	1	·	Limited warranty	One of the follo	wing, configurable by	model:	
					Wi-Fi 2x2 802				 1-year depo 	t repair service		
					Wi-Fi 2x2 802		l 802.11ac + BT4.1			battery depot repai		
Bluetooth™	(US only		11101033-7	10200, N	vialy ouz. I la	u + VVI*I I ZXZ	002.11ac + D14.1			battery limited ons	ite service	
	Bluetooth	4.1 wir	eless, in	tegrated in	Wi-Fi + Blueto	oth_combo ad	apter	Mil-Spec test	MIL-STD-810	G military testing		
					4.2 but is limited			Environment	EPEAT™ Gold	d (US only); ENER	GY STAR® 6.1; RoH	S-compliant
WWAN (optional)	One of the i	following	g, configui	rable by mod	el (mutually excl	usive with WiGig	g):					
	Wireless	WAN	upgradal	ole	TE A							
	Qualcom	m® Sn	andrago	lband 4G L n™ X7 I TE	ı E-A, E-A (Sierra Wire	eless FM7456	5)					
				lband 4G L		71033 EIVI740C	·1					
	Intel XMI	M™ 71	60 (Fibod	com L831-E	EAÚ) (EMEA oi							
SIM card (opt)	Micro-SIM	card s	lot, opt \	erizon LTE	(US) or Lenov	o® Connect (I	EMEA) SIM card					
												Lenov



ThinkPad X280 Platform Specifications

Processor				e™ i3 / i5 P n <i>US and El</i> l		U is NC	T available in	US	Dimensions Weight	WxDxH: 12.11" x 8.26" x 0.69-0.70"; 307.7mm x 209.8mm x 17.4-17.8mm FHD non-touch model: 2.49 lb / 1.13 kg;
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics		HD non-touch model: 2.78 lb / 1.26 kg; FHD multi-touch model: 2.79 lb / 1.27 kg
	i3-7130U i5-7200U i5-7300U	2	4	2.7 GHz 2.5 GHz 2.6 GHz	3.1 GHz 3.5 GHz	3MB 3MB 3MB	DDR4-2133	Intel HD Graphics 620	Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch model) or Glass Fiber (HD & FHD multi-touch model); Bottom: Magnesium/Aluminum
	or 8th Ger	neratio	n Intel Co	ore i3 / i5 / i	7 Processo	or			Smart card reade	er Optional: Smart card reader
	Processor Number	# of Cores	# of Threads	Base Frequency	Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader, in the combo slot with nano-SIM card Two USB 3.1 Gen 1 (one Always On),
	i3-8130U i5-8250U i5-8350U i7-8550U i7-8650U	4	8	2.2 GHz 1.6 GHz 1.7 GHz 1.8 GHz 1.9 GHz	3.4 GHz 3.4 GHz 3.6 GHz 4.0 GHz 4.2 GHz	4MB 6MB 6MB 8MB	DDR4-2400	Intel UHD Graphics 620		one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort), one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole
Graphics	supports t	externa hree in	l digital n depende	nonitor via ent displays		SB Typ	e-C;	BOHz (HDMI)	Monitor cable (optional) Bundled Accy	* Depending on many factors, actual data transfer speed may be lower than theoretical speed HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter Optional: ThinkPad Ethernet Extension Adapter Gen 2
Chipset Memory	4GB, 8GB * 4GB mem * System cl	or 16 ory is N ocks do	GB / 240 IOT availa wn for pro	ble in US an cessors with	R4 / soldere d EMEA lower memo	ory cont	roller	no sockets	Camera (optional	I) One of the following, configurable by model: • HD720p camera with ThinkShutter camera privacy, fixed focus • IR camera and HD720p camera, fixed focus HD Audio, Realtek® ALC3287 codec /
Display	22	20 nits,	16:9 asp	ect ratio, 4	00:1 contra	st ratio		·		stereo speakers, 2W x 2, Dolby® Audio™ Premium / dual array microphone, headphone / microphone combo jack
Multi-touch (opt)	30	00 nits,	16:9 asp	ect ràtio, 7		st ratio	, LED backl , 170° view		Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad
Storage	One of the i	following	g, configui A 6.0Gb/	rable by mod	<i>lel:</i> GB SSD M.	2)	xGB SSD I	M.2 PCIe NVMe)	Security Security chip vPro (optional) Fingerprint reade	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology or Optional: Touch style match on chip fingerprint reader on the palm rest, anti-spoofing technology
Optane™ memory Optical	/None None								NFC (optional)	Near Field Communication
Ethernet							· I219-LM (v Adapter Ger		Battery Max battery life	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 16.6 hr
WLAN + Bluetooth™	Intel Dual * Intel 8265	Band Vacara	Vireless- Supports	AC 8265, V <i>BT4.2 but is</i>	Vi-Fi 2x2 80 limited to BT	2.11ac 4.1 by V	+ Bluetoot Vindows OS	h 4.1, M.2 card	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
WWAN (optional)	Integrate Intel XMIIntegrate Intel XMI	ed Mob M™ 72 ed Mob M™ 73	ile Broad 62 (Fibod ile Broad 60 (Fibod	lband 4G L com L830-E lband 4G L com L850-0	TE, EB), M.2 ca	rd `	• • • • • • • • • • • • • • • • • • • •		Preload Limited warranty	Windows® 10 Home 64 or Windows 10 Pro 64 One of the following, configurable by model: • 1-year depot repair service • 3-year/1-yr battery depot repair service • 3-year/1-yr battery limited onsite service
SIM card (opt)		card s	lot, in the	e combo slo	ot with micr				Mil-Spec test	MIL-STD-810G military testing
Note: The specifica									Environment	EPEAT™ Gold (US only); ENERGY STAR® 6.1; RoHS-compliant



ThinkPad X390 Platform Specifications

Processor	8th Generation Intel® Core™ i3 / i5 / i7 Processor											Dimensions	Models	Models FHD Non-touch HD / FHD Mu		FHD Multi-touch	
	Proce Numb		# of Cores	# of Thread			Max Turbo Frequency	Cache	Memory Types	Processor Graphics			Carbon Fiber 311.9mm x 217.0mm x 16.5n 12.28" x 8.54" x 0.65"				-
	i3-814		2	4	_			4MB 6MB					PPS	312.0mm x 217.2mm 12.28" x 8.55" x 0			x 217.2mm x 16.9mm 8" x 8.55" x 0.67"
	i5-8365U 4 8		8					DDR4-2400	Intel UHD Graphics 620		Weight	Models	FHD Non-touch	Н	D	FHD Multi-touch	
	i7-856		•					8MB					Carbon Fiber PPS	2.70 lb / 1.22 kg		- (4.00.1	0.04 lb / 4.00 lb-
Graphics	Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C; supports three independent displays;											Case color Case material	Black Display cover: Carbon Fiber (FHD non-touch only) or PPS; Bottom: Magnesium/Aluminum				
Object	Max resolution: 4096x2304@60Hz (Thunderbolt); 4096x2160@24Hz (HDMI)										MI)	Smart card reade	der Optional: Smart card reader MicroSD card reader, in the combo slot with nano-SIM 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),				
Chipset Memory	Intel SoC (System on Chip) platform 8GB, 16GB or 32GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation										ets	Ports					
Display	Size Resolution			Туре	Surface	Brightness	Aspec Ratio		Color Gamut	Viewing Angle		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP), HDMI 1.4b, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader,					
	13.3"	HD (1	366x76	68)	TN	Anti-glare	250 nits	16:9	500:1	45%	90°		headphone / m	nicrophone combo jack	k, optional s	mart card r	eader,
	13.3"	FHD ((1920x ⁻	1080)	IPS	Anti-glare	300 nits	16:9	800:1 (non-touch 700:1 (multi-touch	12%	170°	Monitor cable (optional)	* Depending on HDMI to VGA: USB-C to VGA	Lenovo HDMI to VO A: Lenovo USB-C to V	transfer spee GA Monitor I GA Adapte	Adapter r	wer than theoretical speed
	13.3"		(1920x ⁻ Pad Pri		IPS	Anti-glare	400 nits	16:9	1000:1	72%	178°	Bundled Accy	USB-C to DP: Optional: Thin	Lenovo USB-C to D kPad Ethernet Extens	DisplayPort A ion Adapter	Adapter	
Multi-touch (opt)	$\overline{}$			upports	10-fii	nger gest	ture (FHD	only)	1		<u> </u>	Camera (optional	onal) One of the following, configurable by model: • 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 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											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 				
Optical	None		J, PUI	e invivie	3.0	X 4						Keyboard UltraNav™	6-row, spill-res	istant, multimedia Fn l inting device and butto	ceys, option	nal LED bac	klight
Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2											Security Security chip	Power-on pass	sword, hard disk passw 2.0. TCG Certified			
, ,	One of the following, configurable by model: Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0											System Mgt (opt)	Intel vPro Tech	nnology ch style match on chip	fingerprint	reader on tl	ne palm rest
Bluetooth™								etooth	combo adar	oter		Battery			orts Rapid	Charge (cha	arge up to 80% in 1hr)
WWAN (optional)	 One of the following, configurable by model: Integrated Mobile Broadband 4G LTE, Fibocom L830-EB, M.2 card (EMEA only) Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card For non-WWAN model, it means the model is NOT WWAN upgradable 										Max battery life AC adapter	with 65W USB Type-C AC adapter MobileMark® 2014: 17.6 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter					
	•											Preload	Windows® 10 Home 64 or Windows 10 Pro 64				
												Limited warranty	1-year depot3-year/1-yr b	ving, configurable by mode repair service cattery depot repair ser cattery limited onsite se	vice		
												Mil-Spec test	MIL-STD-810G military testing				
·									Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant							





дома





AMD

ThinkPad X395 Platform Specifications

Processor	essor AMD Ryzen™ PRO Mobile Processors with Radeon™ Vega Graphics									Dimensions	<i>WxDxH:</i> 12.28" x 8.55" x 0.67"; 311.9mm x 217.2mm x 16.9mm				
	Processor Number	# of	# of Threads	Base Frequence	Max Turbo Frequency	Cache	Memory Controller		cessor	Weight	Models HD / FHD multi-touch FHD non-touch FHD Privacy Guard				
	Ryzen 3	4	1 III Eaus	2.1 GHz	3.5 GHz	2MB L2 /	Controller	-	n Vega 6	Case color	Weight 2.91 lb / 1.32 kg 2.82 lb / 1.28 kg 3.01 lb / 1.37 kg Black				
	Pro 3300U 4 4 8 Pro 3500U 4 8		4	2.1 GHZ		4MB L3	DDR4-2400		phics	Case material	Display cover: PPS/GF; Bottom: Magnesium/Aluminum er Optional: Smart card reader				
			8	2.1 GHz	3.7 GHz	2MB L2 / 4MB L3			n Vega 8 phics	Smart card reade					
	Ryzen 7 Pro 3700U	4	8	2.3 GHz	4.0 GHz	2MB L2 / 4MB L3			n Vega 10 phics	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	supports t	externa hree in	Ĭ digital ı depende	monitor vent displa	rega 10 Grap ia USB-C or ys; z (USB-C);	HDMI;	,	HDMI)			two USB 3.1 Type-C Gen 2 (with the function of Power Delivery and DisplayPort), HDMI 2.0, Ethernet extension connector, combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader, side docking connector, security keyhole				
Chipset Memory		ĠĔ/24	400MHz	DDR4/	rm soldered to s z but run at 24					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				
Display	Size Reso	olution	Т	ype Surf	ace Brightne	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Bundled Accy Camera (optional	Optional: ThinkPad Ethernet Extension Adapter Gen 2 I) One of the following, configurable by model:				
	13.3" HD (1366x76	68)	TN Anti-	lare 250 nits	_	300:1	45%	90°	James a (opnosial)	HD720p camera with ThinkShutter camera privacy, fixed focus				
	13.3" FHD	,		PS Anti-	lare 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 Think		1080) vacy I	PS Anti-	lare 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-cell to	uch, su	pports 1	0-finger	gesture (FHE	only)		-1		Security Security chip	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified				
Storage	• M.2 228				21-00-4					System Mgt	DASH Management				
Optical	M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 None									Fingerprint reade NFC	r Optional: Touch style match on chip fingerprint reader on the palm rest None				
Ethernet	Native Realtek® RTL8153 Gigabit Ethernet connection via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2									Battery	Integrated Li-ion 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter				
WLAN <i>(optional)</i> Bluetooth™	Intel Wireless-AC 9260, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter									Max battery life AC adapter	MobileMark® 2014: 14.5 hr * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter				
WWAN (optional)	(optional) One of the following, configurable by model: • Wireless WAN upgradable									Preload	Windows® 10 Home 64 or Windows 10 Pro 64				
	 Integrate 	ed Mob	upgrada ile Broad	มเ ย dband 40	LTE-A, Fibo	com L85	50-GL, M.2 c	ard		Limited warranty	One of the following, configurable by model:				
SIM card (opt)	* 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 					
										Mil-Spec test	MIL-STD-810G military testing				
										Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant				

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

Lenovo Services:

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

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

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

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

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

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

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

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

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Summary of Changes

This section describes the technical changes made in this edition.

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

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Additions in this update

► New product(s)

None

► New model(s)

None

▶ Others

None

Changes in this update

►None

Withdrawals in this update

► Withdrawn product(s)

None











ThinkPad X1 Tablet (3rd Gen) Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Control buttons	Power button, volume control button, reset switch
	Processor # of # of Base Max Turbo Cache Memory Types Processor Graphics	Dock Monitor cable (opt	Optional: Hybrid dock
	i5-8250U 1.6 GHz 3.4 GHz 6MB) USB-C to RJ45: Lenovo USB-C to Ethernet Adapter USB-C to VGA: Lenovo USB C to VGA Plus Power Adapter
	1.7 GHz 3.6 GHz 6MB LPDDR3-2133 Intel UHD Graphics 620		USB-C to HDMI: Lenovo USB-C to HDMI Plus Power Adapter
	1.6 GHZ	Camera	Front camera: 2.0-megapixel, fixed focus Rear camera: 8.0-megapixel, auto focus
Graphics	Intel UHD Graphics 620 in processor, supports external digital monitor via USB Type-C	IR Camera Audio support	Optional: IR camera, fixed focus (Not available with NFC) Realtek® ALC3278 codec / stereo speakers, 1W x 2 /
Chipset Memory	Intel SoC (System on Chip) platform 8GB, or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Pogo keyboard	two microphones, combo audio/microphone jack Magnetic attached thin keyboard, with TrackPoint® pointing device and
Display	13.0" (330mm) QHD+ (3000x2000), glossy, LED backlight, IPS, anti-figerprint display with Corning® Gorilla® Glass, WideView (160° viewing),	Keyboard color	buttonless Mylar surface touchpad, multi-touch, backlit Black
Multi-touch Pen Kick stand	400 nits, 3:2 aspect ratio, 1200:1 contrast ratio Capacitive touch panel, supports ten-finger gesture Optional: Lenovo Pen Pro or Lenovo Active Pen (ThinkPad Pen Pro) for multi-touch display Opening angle up to 170 degrees	Security Security chip System Mgt (opt) Fingerprint reade NFC (optional)	Kensington lock slot Discrete TPM 2.0 TCG Certified Intel vPro Technology r Optional: Touch style Fingerprint reader Near Field Communication (Not available with the IR camera)
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)	Battery	Integrated Li-Ion 42Wh battery
Optical Storage extension	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) None nOne MicroSD card reader, in the combo slot with nano-SIM card, support	Max battery life AC adapter	MobileMark® 2014: 9.5 hrs * Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	USH-I, microSDHC, microSDXC	Light sensor	Ambient Light Sensor
Ethernet	None	G-sensor Gyroscope	3D accelerometer 3D gyrometer
WLAN	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS	GPS .	GPŠ function is integrated into WWAN module
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter	Preload	Some: Windows 10 Pro 64 Some: Windows 10 Home 64
WWAN (optional)	Integrated Mobile Broadband 4G LTE-A, Qualcomm® Snapdragon™ X7 LTE-A (Sierra Wireless EM7455)	Limited warranty	One of the following, configurable by model:
SIM card (opt)	Nano-SIM card slot, in the combo slot with microSD card reader		 1-year depot repair service 3-year/1-yr battery depot repair service
Dimensions	Tablet only: 11.97" x 8.9" x 0.35"; 304.1mm x 226mm x 8.9mm Tablet + keyboard: 11.97" x 8.9" x 0.57"; 304.1mm x 226mm x 14.4mm		3-year/1-yr battery limited onsite service
Weight	Tablet only: starting at 1.96 lb (0.89kg)	Mil-Spec test	MIL-STD-810G military testing
Case color Case material	Tablet+keyboard: starting at 2.8 lb (1.27kg) Black Magnesium/Aluminum	Environment	EPEAT™ Silver, GREENGUARD, Low Halogen, RoHS
Smart card reade Ports	rNone Two USB 3.1 Type-C Gen 1 / Thunderbolt 3 / Power Delivery 3.0, one Pogo keyboard connector, one Pen holder slot, headphone / microphone combo jack, combo slot of nano-SIM card (WWAN models) and microSD card reader * Depending on many factors, actual data transfer speed may be lower than theoretical speed		













ThinkPad L380 Yoga Platform Specifications

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

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ThinkPad L390 Yoga Platform Specifications

Processor	8th Gener	ation I	ntel® Cor	e™ i3 / i5 /	i7 Process	or			Smart card reade	
	Processor Number		# of Threads		Max Turbo Frequency	Cache	Memory Types	Processor Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 1 (with the function of Power Delivery and DisplayPort),
	i3-8145U i5-8265U i5-8365U	4	4 8 8	2.1 GHz 1.6 GHz 1.6 GHz	3.9 GHz 3.9 GHz 4.1 GHz	DIVID	DDR4-2400	Intel UHD Graphics 620	Monitor cable	HDMI 1.4b, Ethernet extension connector, headphone / microphone combo jack, microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed USB-C to VGA: Lenovo USB-C to VGA
Graphics	supports t	externa hree ir	al digital r ndepende	1.8 GHz n processo monitor via ent displays 04@60Hz	HDMI or U ;;	,,	,	30Hz (HDMI)	(optional) Bundled	USB-C to VGA + Power Adapter: USB-C to HDMI: USB-C to HDMI: USB-C to HDMI + Power Adapter: Lenovo USB-C to HDMI plus Power Adapter USB-C to DBP: Lenovo USB-C to DisplayPort Adapter USB-C to RJ45: Lenovo USB-C to Ethernet Adapter
Chipset Memory				ip) platform DR4, dual-c		pable, t	wo DDR4 S	SO-DIMM sockets	Accessories (optional)	USB-C to USB-A: USB-C to USB-C: Lenovo USB-C to USB-A Adapter Lenovo USB-C to USB-C Cable 2M
Display Multi-touch Hinge Multi-mode Pen (optional)	300 nits, 1 Capacitive Yoga hing Notebook,	6:9 as e-type e, 360 , stand	pect ration multi-toud degree , tent, tal	ch, AR (ant	ntrast ratio i-reflection	, 72% g), supp	amut, 170° orts 10-fing	viewing angle per gesture	Camera Audio support	720p: HD720p resolution, low light sensitive, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus (black model only) World facing: 5MP resolution, auto focus (mutually exclusive with fingerprint reader) HD Audio, Realtek ALC3287 codec, Dolby® Audio™ Premium / stereo speakers, 2W x 2 / dual array microphone, headphone / microphone combo jack
Storage	 M.2 SSI 	D / SAT	A 6.0Gb						Keyboard UltraNav™	6-row, spill-resistant, multimedia Fn keys, optional LED backlight TrackPoint® pointing device and buttonless Mylar surface touchpad, multi-touch
Optane™ Memory Optical	 M.2 (228) Intel Op M.2 228 Y Optional: I None 	80) SS tane M 0, PCI Intel O	D / PCIe lemory H e NVMe ptane Me	emory H10	Cle 3.0 x 4 lid State S	torage,				Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0, TCG Certified Intel vPro Technology r Optional: Touch style fingerprint reader on the palm rest (mutually exclusive with World facing camera) Near Field Communication
Storage Optical	 M.2 SSI 	D / SAT	A 6.0Gb	rable by mod /s (e.g. xxx , PCIe 3.0)	GB SSD M	l.2) s (e.g. x	xxGB SSD	M.2 PCIe NVMe)	Battery Max battery life	Integrated Li-Ion 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 12.17 hrs
Ethernet	Native Inte	el Ethe	rnet Con	nection I21	9-V (<i>Non-</i>	vPro) o	r I219-LM (vPro)	AC adapter	* Battery life varies significantly with settings, usage, & other factors 45W or 65W USB Type-C AC adapter
	via optiona Lenovo US	al Thin SB-C t	kPad Eth o Ethern	ernet Exte	nsion Cabl	e or			Preload	Windows® 10 Home 64 or Windows 10 Pro 64
WLAN Bluetooth™	Bluetooth			Vi-Fi 2x2 80 tegrated in					Limited warranty	One of the following, configurable by model: 1-year depot repair service 3-year/1-yr battery depot repair service
WWAN	None									3-year/1-yr battery limited onsite service
Dimensions Weight Case color Case material	WxDxH: 12.67" x 8.82" x 0.74"; 321.8mm x 224.2mm x 18.8mm Starting at 3.44 lbs / 1.56 kg Black or Silver Display cover: Magnesium / Aluminum Bottom: GFRP								Mil-Spec test Environment	MIL-STD-810G military testing EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
										Langua











ThinkPad X1 Yoga (3rd Gen) Platform Specifications

Processor	7th Generation Intel® Core™ i5 Processor	Smart card readerl	None
	Processor Number # of Cores # of Threads Base Frequency Max Turbo Frequency Cache Memory Types Processor Graphics i5-7300U 2 4 2.6 GHz 3.5 GHz 3MB LPDDR3-1866 Intel HD Graphics 620	Media reader Ports	MicroSD card reader, supports UHS-II Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3, HDMI 1.4, Ethernet extension connector, nano-SIM card slot (WWAN models), headphone / microphone combo jack, microSD card reader
	8th Generation Intel Core i5 / i7 Processor	WiGig dock I	* Depending on many factors, actual data transfer speed may be lower than theoretical speed None HDMI to VGA: Lenovo HDMI to VGA Monitor Adapter
	Processor # of # of Base Max Turbo Cache Memory Types Processor Graphics		USB-C to VGA: Lenovo USB-C to VGA Adapter USB-C to DP: Lenovo USB-C to DisplayPort Adapter
	1.6 GHz 3.4 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.7 GHz 3.6 GHz 6MB 1.8 GHz 4.0 GHz 8MB 1.9 GHz 4.2 GHz 4.2 GHz 8MB 1.9 GHz 4.2		One of the following, configurable by model: 720p: HD720p camera with ThinkShutter camera privacy, fixed focus IR & 720p: IR camera and HD720p camera, fixed focus * WWAN models and HDR panel models can not support IR camera
Graphics	Intel HD Graphics 620 or Intel UHD Graphics 620 in processor; supports external digital monitor via HDMI or USB Type-C;		HD Audio, Realtek® ALC3286 codec, Dolby® Audio™ Premium / stereo speakers, 1W x 2 / dual array microphone, headphone / microphone combo jack
	supports three independent displays; Max resolution: 5120x2880@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)		6-row wave keyboard (rise & fall), spill-resistant, multimedia Fn keys, LED backlit TrackPoint® pointing device and 3+2 buttons multi-touch clickpad
Chipset Memory	Intel SoC (System on Chip) platform 8GB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets	Security chip I	Power-on password, hard disk password, supervisor password, security keyhole Discrete TPM 2.0 TCG Certified Intel vPro Technology
Display	Some: 14.0" (355mm) FHD (1920x1080), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, IPS	Fingerprint reader	The verto lectrology Touch style match on chip fingerprint reader on the palm rest Near Field Communication
	Some: 14.0" (355mm) WQHD (2560x1440), LED backlight, 300 nits, 16:9 aspect ratio, 700:1 contrast ratio, 72% gamut, 170° viewing angle, IPS Some: 14.0" (355mm) HDR WQHD (2560x1440) with Dolby Vision™, LED backlight, 500 nits, 16:9 aspect ratio, 1500:1 contrast ratio, 100% gamut, 170° viewing angle, IPS	Max battery life	Integrated Li-Ion 54Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W USB Type-C AC adapter MobileMark® 2014: 15.4 hrs * Battery life varies significantly with settings, usage, & other factors
Multi-touch	Capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge), supports 10-finger gesture, reduces overall display brightness by 10%		45W or 65W USB Type-C AC adapter Ambient Light Sensor
Hinge Convert-mode	Yoga hinge, 360 degree Laptop, tent, stand, and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	G-sensor Gyroscope	3D accelerometer 3D gyrometer GPS function is integrated into WWAN module
Storage	Some: M.2 SSD / SATA 6.0Gb/s (e.g. xxxG SSD)		Windows® 10 Pro 64
Optical Ethernet	Some: M.2 SSD / PCIe NVMe, PCIe 3.0 x 4, 32Gb/s (e.g. xxxG SSD PCIe NVMe) None Native Intel Ethernet Connection WGI219-LM (<i>vPro</i>)		One of the following, configurable by model: 1-year depot repair service 2-year(depot repair service)
Linernet	via optional ThinkPad Ethernet Extension Cable		3-year/1-yr battery depot repair service MIL-STD-810G military testing
	Intel Dual Band Wireless-AC 8265, Wi-Fi 2x2 802.11ac + Bluetooth 4.1, M.2 card * Intel 8265ac card supports BT4.2 but is limited to BT4.1 by Windows OS		EPEAT™ Silver; ENERGY STAR®; RoHS-compliant
Bluetooth™	Bluetooth 4.1 wireless, integrated in Wi-Fi + Bluetooth combo adapter		
() /	Integrated Mobile Broadband 4G LTE-A, Intel XMM™ 7360 (Fibocom L850-GL), M.2 card Nano-SIM card slot, optional Verizon LTE (US) SIM card		
Dimensions Weight	WxDxH: 13.11" x 9.02" x 0.67"; 333mm x 229mm x 17.05mm Starting at 3.08 lb (1.4kg)		
Case color Case material	Black or silver Display cover: Bottom: Carbon-Fiber and Glass-Fiber hybrid; magnesium-PPS hybrid		
			Lenovo













ThinkPad X1 Yoga (4th Gen) Platform Specifications

Processor Fol Set Base Max Tubb Cache Memory Type Processor Fol Fol Set	Processor	8th Ger	neration Ir	ntel® Coi	re™ i5 /	i7 Proce	ssor					Smart card reade	erNone
February		Number i5-8265	r Cores		Freque 1.6 G	ency Freq Hz 3.9	uency Caci GHz 6Mi	В	· ·	Graph	nics	Media reader	None Two USB 3.1 Gen 1 (one Always On), two USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of Power Delivery and DisplayPort), HDMI 1.4b, Ethernet extension connector, nano-SIM card slot (WWAN models).
Camera (optional) One of the following, configurable by model: Supports There in Independent of Edgishys, was resolution: 5120x2880 @ 60Hz (USB Type-C); 4096x2160@ 24Hz (HDMI) Chipset Memory GBB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets		i7-8565l i7-8665l	U 4 U		1.8 G 1.9 G	Hz 4.6 Hz 4.8	GHz 8M	B LPDD	R3-2133				* Depending on many factors, actual data transfer speed may be lower than theoretical speed Optional: Lenovo HDMI to VGA Monitor Adapter
Memory SGB or 16GB / 2133MHz LPDDR3 / soldered to systemboard, no sockets Display Size Resolution Type Surface Brightness Aspect Contrast Color Vewening Ratio 14.0 PHO (1920x1080) IPS Glossy 380 nits 16.9 800.1 72% 170* 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 800.1 72% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 800.1 72% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 800.1 72% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 800.1 72% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 170* 110.0 ThinkPad Privacy IPS Glossy 280 nits 16.9 1400.1 90% 170* 170* 170* 170* 110* 110* 110* 110*	Graphics	supports external digital monitor via HDMI or USB Type-C / Thunderbolt; supports three independent displays;									OMI)		l) One of the following, configurable by model:
Size Resolution Type Surface Brightness Ratio Coord Viewing Ratio Gallor (Viewing Ratio Gallor (Viewing Ratio Gallor (Viewing Ratio Gallor) (Viewing Ratio Gall	Memory	Intel Sc 8GB or	C (Syster 16GB / 2	m on Ch	iip) plat z LPDD	form R3 / sold	ered to sy	stemboa	ard, no s	ockets	,	Audio support	Stereo speakers, 2W x 2, 0.8W x 2, Dolby® Audio™ Atmos /
14.0° FHD (1920x1080) PS Glossy 380 nits 16:9 800:1 72% 170°	Display	Size	Resolut	tion	Туре	Surface	Brightness					UltraNav™	6-row, spill-resistant, multimedia Fn keys, LED backlight TrackPoint® pointing device and buttonless Glass surface multi-touch touchpad
Auto ThinkPad Privacy IPS Glossy 380 nits 16:9 1000:1 72% 170° 14.0° WOHD 14.0° WOHD (2560x1440) IPS Glossy 280 nits 16:9 800:1 72% 170° 14.0° Doby Vision 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 14.0° Doby Vision IPS Glossy 470 nits 16:9 1400:1 90% 170° 1400:1 90% 170° 1400:1 100°		14.0"	Low Power		IPS	Glossy	380 nits	16:9	800:1	72%	170°	Security chip System Mgt Fingerprint reade	Optional: Intel vPro Technology rTouch style match on chip fingerprint reader on the palm rest
MoHD 14.0° WOHD 1PS Glossy 280 nits 16:9 800:1 72% 170° AC adapter AC adapter 45W or 65W USB Type-C AC adapter 45W or 65W USB Ty		14.0"	ThinkPad P		IPS	Glossy	380 nits	16:9	1000:1	72%	170°		Integrated Li-lon 51Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
Multi-touch		14.0*	(2560x1440	,	IPS	Glossy	280 nits	16:9	800:1	72%	170°	1	MobileMark® 2014: 18.1 hrs * Battery life varies significantly with settings, usage, & other factors
Multi-touch Saupports 10-finger gesture Yoga hinge, 360 degree Laptop, tent, stand, and tablet ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable Storage One of the following, configurable by model: - Mindows 10 Home 64 - Windows 10 Home 64 - Vindows 10		14.0"	Dolby Visio HDR400	n TM ′						90%	170°	Gyroscope	3D gyrometer
Storage One of the following, configurable by model: • M.2 2280 SSD / SATA 6.0Gb/s • M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 • Intel Optane Memory H10 with Solid State Storage, M.2 2280, PCle NVMe 3.0 x 4 Optane™ Memory Intel Optane Memory H10 Optical Optical None Ethernet Native Intel Ethernet Connection I1219-LM (vPro) or I1219-V (Non-vPro) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, MIMO 2x2, M.2 card	Hinge	support Yoga hi Laptop,	ts 10-finge inge, 360 , tent, star	er gestu degree nd, and t	re ´ tablet	`	,,	`	3 //			Preload	One of the following, configurable by model: • Windows® 10 Pro 64
• M.2 2280 SSD / PCIe NVMe, PCIe 3.0 x 4 • Intel Optane Memory H10 with Solid State Storage, M2 2280, PCIe NVMe 3.0 x 4 Optane™ Memory Intel Optane Memory H10 None Ethernet Native Intel Ethernet Connection I1219-LM (<i>vPro</i>) or I1219-V (<i>Non-vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (<i>optional</i>) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card SIM card (<i>opt</i>) Nano-SIM card slot, optional Verizon LTE (US) SIM card Dimensions WxDxH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Weight Case color Iron Gray		One of t	he following	g, configu	ırable by	model:	uch displa	ıy, on-bo	ard rech	argeab	le	Limited warranty	1-year depot repair service
M.2 2280, PCIe NVMe 3.0 x 4 Optane™ Memory Intel Optane Memory H10 Optical None Ethernet Native Intel Ethernet Connection I1219-LM (<i>vPro</i>) or I1219-V (<i>Non-vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card Nano-SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Dimensions WxDxH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Weight Starting at 2.99 lb (1.36kg) Case color Iron Gray		 M.2 2 	2280 SSD	/ PCIe I	NVMe,	PCIe 3.0						Mil-Spec test	MIL-STD-810G military testing
Ethernet Native Intel Ethernet Connection I1219-LM (<i>vPro</i>) or I1219-V (<i>Non-vPro</i>) via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2 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 WWAN (<i>optional</i>) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card SIM card (<i>opt</i>) Nano-SIM card slot, optional Verizon LTE (US) SIM card Dimensions WxDXH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Weight Starting at 2.99 lb (1.36kg) Iron Gray		M.2 2 y Intel Op	2280. PCI	e NVMe	3.0 x 4		iate Storaț	ge,				Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant
WLAN Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0, M.2 card Bluetooth™ Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter WWAN (optional) One of the following, configurable by model: • Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card • Integrated Mobile Broadband 4G LTE-A, Fibocom L860-GL, MIMO 2x2, M.2 card Nano-SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Dimensions WxDxH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Weight Starting at 2.99 lb (1.36kg) Iron Gray													
• 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 SIM card (opt) Nano-SIM card slot, optional Verizon LTE (US) SIM card Dimensions WxDxH: 12.71" x 8.58" x 0.61"; 323mm x 218mm x 15.5mm Weight Starting at 2.99 lb (1.36kg) Iron Gray		Intel Wi	ireless-AC	9560, \	Ni-Fi 2	(2 802.11	ac + Blue	tooth 5.0), M.2 ca	rd			
Dimensions	, , ,	IntegritionIntegrition	rated Mob rated Mob	oile Broa oile Broa	dband dband	4G LTE-/ 4G LTE-/	۹, Fibocon	n L860-0	GL, M.2 o GL, MIMO	card O 2x2, N	M.2 card		
Bottom: Magnesium	Dimensions Weight	Starting Iron Gra Display	g at 2.99 l ay <i>cover:</i>	b (1.36k Aluminiu	:g) um;	"; 323	3mm x 218	mm x 15	5.5mm				













ThinkPad X380 Yoga Platform Specifications

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

















ThinkPad X390 Yoga Platform Specifications

Processor	8th Generation Intel® Core™ i5 / i7 Processor	Smart card reade	rOptional: Smart card reader			
	Processor # of # of Base Max Turbo Cache Mamary Types Processor	Media reader	MicroSD card reader, in the combo slot with nano-SIM card			
		Ports	Two USB 3.1 Gen 1 (one Always On), one USB 3.1 Type-C Gen 1 (with the function of Power Delivery and Display Port),			
	i5-8265U		one USB 3.1 Type-C Gen 2 / Thunderbolt 3 (with the function of PD and DP),			
	i7-8565U 4 8 1.8 GHz 4.6 GHz 8MB DDR4-2400 Graphics 620		HDMI 1.4b, Ethernet extension connector,			
	i7-8665U 4 8 1.9 GHz 4.8 GHz 8MB		combo slot of nano-SIM card (WWAN models) and microSD card reader, headphone / microphone combo jack, optional smart card reader.			
Graphics	Intel UHD Graphics 620 in processor only;	-	side docking connector, security keyhole			
Graphics	supports external digital monitor via HDMI or USB Type-C;	Manathan a alala	* Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	supports three independent displays;	Monitor cable (optional)	USB-C to HDMI: Lenovo USB-C to HDMI Adapter USB-C to VGA: Lenovo USB-C to VGA Adapter			
	Max resolution: 4096x2304@60Hz (USB Type-C); 4096x2160@24Hz (HDMI)	Coptional	USB-C to DP: Lenovo USB-C to DisplayPort Adapter			
Chipset	Intel SoC (System on Chip) platform	Bundled Accy	Optional: ThinkPad Ethernet Extension Adapter Gen 2			
Memory	8GB or 16GB / 2400MHz DDR4 / soldered to systemboard, no sockets * Installed memory is actually 2666MHz but run at 2400MHz due to Intel limitation	Camera	One of the following, configurable by model:			
Display	13.3" (337.8mm) FHD (1920x1080), LED backlight, IPS, Glossy, 300 nits,	-	 HD720p camera, with ThinkShutter camera privacy, fixed focus IR camera and HD720p camera, with ThinkShutter camera privacy, fixed focus 			
ызріау	16:9 aspect ratio, 800:1 contrast ratio, Color Gamut 72%, 170° viewing angle,	Audio support	HD Audio, Realtek® ALC3287 codec / stereo speakers, 2W x 2, Dolby® Audio™ Pre-			
	capacitive-type multi-touch, AR (anti-reflection), AS (anti-smudge)		mium / dual array microphone, headphone / microphone combo jack			
Multi-touch Hinge	supports 10-finger gesture Yoga hinge, 360 degree	Keyboard	6-row, spill-resistant, multimedia Fn keys, LED backlight			
Convert-mode	Laptop, tent, stand and tablet	UltraNav™	TrackPoint® pointing device and buttonless Mylar surface multi-touch touchpad			
Pen	ThinkPad Pen Pro, active pen for multi-touch display, on-board rechargeable	Security	Power-on password, hard disk password, supervisor password, security keyhole			
Storage	• M.2 2280 SSD / SATA 6.0Gb/s	Security chip System Mat (ont)	Discrete TPM 2.0 TCG Certified Intel vPro Technology			
	 M.2 2280 SSD / PCle NVMe, PCle 3.0 x 4 M.2 2242 SSD / PCle NVMe, PCle 3.0 x 2 	Fingerprint reader	rTouch style match on chip fingerprint reader on the palm rest			
	Intel Optane Memory H10 with Solid State Storage,	NFČ (optional)	Near Field Communication			
	M.2 2280, PCIe NVMe 3.0 x 4	Battery	Integrated Li-ion 50Wh battery, supports Rapid Charge (charge up to 80% in 1hr)			
	Optional: Intel Optane Memory H10 None	Max battery life	with 65W USB Type-C AC adapter MobileMark® 2014: 14.5 hrs			
Optical Ethernet	Native Intel Ethernet Connection I219-V (<i>Non-vPro</i>) or I219-LM (<i>vPro</i>)	1	* Battery life varies significantly with settings, usage, & other factors			
Ellielliel	via bundled or optional ThinkPad Ethernet Extension Adapter Gen 2	AC adapter	45W or 65W USB Type-C AC adapter			
WLAN	One of the following, configurable by model:	Light sensor	None			
VV E7 (1 V	 Intel Wireless-AC 9560, Wi-Fi 2x2 802.11ac + Bluetooth 5.0 	G-sensor Gyroscope	3D accelerometer 3D gyrometer			
	• Intel Wi-Fi 6 AX200, Wi-Fi 2x2 802.11ax + Bluetooth 5.0	Preload	Windows® 10 Home 64 or Windows 10 Pro 64			
Bluetooth™	Bluetooth 5.0 wireless, integrated in Wi-Fi + Bluetooth combo adapter					
WWAN (optional)	One of the following, configurable by model: Integrated Mobile Broadband 4G LTE, Fibocom L830-EB,	Limited warranty	One of the following, configurable by model: 1-year depot repair service			
	M.2 card (EMEA only)		3-year/1-yr battery depot repair service			
	• Integrated Mobile Broadband 4G LTE-A, Fibocom L850-GL, M.2 card		3-year/1-yr battery limited onsite service			
	* For non-WWAN model, it means the model is NOT WWAN upgradable	Mil-Spec test	MIL-STD-810G military testing			
Dimensions	WxDxH: 12.22" x 8.62" x 0.63"; 310.4mm x 219mm x 15.95mm	Environment	EPEAT™ Silver; ENERGY STAR® 7.1; RoHS-compliant			
	Starting at 2.85 lb (1.29kg) Black or silver					
	Display cover. Carbon-Fiber Hybrid					
	Bottom: Carbon-Fiber Hybrid					
			Lenovo			

Lenovo July 2019











ThinkPad Yoga 11e (5th Gen) Platform Specifications

Processor	7th Genera Intel Penti				Processo	r, Intel	Celeron® prod	cessor, or	Dimensions Weight	<i>WxDxH</i> : 11.81" x 8.27" x 0.89"; 300mm x 210mm x 22.5mm From 3.4 lb (1.54kg)
	Processor Number	# of Cores	# of Threads	Base Frequency	Burst Frequency	Cache	Memory Controller	Processor Graphics	Case color Case material	Black Display cover: PC/ABS+GF; Bottom: PC/ABS plastic
	m3-7Y30	2			2.6 GHz	4MB	LPDDR3-1866	Intel HD Graphics	Media reader Ports	MicroSD card reader Two USB 3.1 Gen 1, one USB 3.1 Type-C Gen 1, HDMI1.4,
	i5-7Y54			1.2 GHz	3.2 GHz	4MB	LI DDI 13-1000	615	FOILS	Ethernet (RJ-45), headphone / microphone combo jack,
	Cel N4100		4	1.1 GHz	2.4 GHz	4MB	DDD 4 0 400	Intel UHD Graphics 600		microSD card reader, security keyhole * Depending on many factors, actual data transfer speed may be lower than theoretical speed
	Pen N5000	4		1.1 GHz	2.7 GHz	4MB	DDR4-2400	Intel UHD Graphics 605	Control buttons	Power button, volume control button
Graphics	Intol UD C	rophic	0 61E I	ntal LIUD (Prophico 6	00 01	20E in process		Camera	One of the following, configurable by model:
Graphics	Intel HD Graphics 615, Intel UHD Graphics 600 or 605 in processor, supports external digital monitor via HDMI or USB Type-C; supports dual independent display; Max resolution: 3840x2160@60Hz (USB Type-C); 4096x2160@30Hz (HDMI)								Audio support	720p: HD720p resolution, low light sensitive, fixed focus World facing: Rear camera, 5MP resolution, auto focuss HD Audio, Realtek® ALC3287 codec Dolby Audio / stereo speakers, 2W x 2 / monaural microphone, headphone / microphone combo jack
Chipset Memory	Intel SoC (4GB or 8G					lz DDF	R4 /		Keyboard UltraNav™	6-row, multimedia Fn keys Two buttons click pad below keyboard, multi-touch
Display MultiTouch	250 nits, 1 Capacitive	6:9 as	HD (1360 pect rati multi-tou	6x768), and io, 800:1 co	ti-glare, LE ontrast rat	io, 170	klight, IPS ° viewing ang	le	Security Security chip System Mgt (opt) Fingerprint reader	
Hinge Convertible mode Pen	Yoga hinge Laptop, ter Optional:	nt. sta	nd and t	ablet Pro, batter	ries requir	ed, on-	board garage		Battery Max battery life	Integrated Li-Ion 42Wh battery MobileMark® 2014: 12 hrs * Battery life varies significantly with settings, usage, & other factors
Storage	eMMC flas								AC adapter	45W or 65W slim tip AC adapter or USB Type-C AC adapter
Optical	M.2 SSD / None	PCIe	NVMe,	PCIe 3.0 x	2, 16Gb/s	; 			Preload	Some: Windows® 10 Home 64 Some: Windows 10 Pro 64
Ethernet	Realtek R					Conne	ction		Limited warranty	One of the following, configurable by model:
WLAN		eless-A	AC 9260	, Wi-Fi 2x2	802.11ac		etooth 5.0, M.			1-year depot repair service3-year depot repair service
Bluetooth™							etooth 5.0, M. combo adapte		Mil-Spec test	MIL-STD-810G military testing
WWAN	None						· ·		Environment	EPEAT™ Gold; ENERGY STAR® 6.1; RoHS-compliant

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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.

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

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

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

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

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

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Summary of Changes

This section describes the technical changes made in this edition.

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

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Additions in this update

► New product(s)

ThinkCentre M90n-1 Nano ThinkCentre M90n-1 Nano IOT

► New model(s)

None

▶ Others

Update EPEAT rating for all ThinkCentre products

Withdrawals in this update

► Withdrawn product(s)

None

► Withdrawn model(s)

None













ThinkCentre M810z Platform Specifications

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



























ThinkCentre M820z Platform Specifications

Processor	Intel® Celeron®, Intel	Pontium®	or 9th / 9th Cor	Intol Co	vroTM i2 / i5 / i7 / i0	corios	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),
Processor	,	Cores /	Frequency		Memory Support		WLAN	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), 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 slot (in rear for attachment of • Power-on, admin, hard disk password
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630		optional Kensington® MicroSaver® cable; Boot sequence control
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Kensington lock also locks chassis) • Boot without keyboard and mouse
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630		 Smart USB protection, allows keyboard/ Individual USB port disablement mouse only, blocks all storage devices Optional Chassis intrusion switch
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	16 1	
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Mechanical	Business black color
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		 Toolless back cover, stand, memory removal Support VESA mount (100mm)
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Dimensions (WxDxH) Max weight (lb / kg) Adjustments
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Without stand (No camera): 19.3 X 1.9 X 13.5 (inch) (Touch) 11.6 / 5.25
Memory	32GB max (16GB SC				oid models), DDR	4-2666*,		491 X 49 X 342 (mm) (Non-touch) 11.1 / 5.05
	two 260-pin SO-DIMN							With Full Function Monitor stand (No camera):
	* System clocks dowr	n for the p	rocessors with lo	ower me	mory controller			19.3 X 9.9 X 14.8 to 19.1 (inch) Tilt: 45° back, -5° forward;
Storage	Some: Hard Drive / S				200 rpm			491 X 252 X 377 to 486 (mm) (Non-touch) 15.8 / 7.18 Lill: 110mm;
	Some: Solid State D							With UltraFlex III stand (No camera):
	Some: M.2 SSD / PC * 128GB SSD M.2 (2)	742) PCI	NVMe only sun	32GD/S norte PC	16Gh	/e		Tilt: 70° book 5° forward:
	Some: Intel Optane	Memory	(not support Ce	leron / F	entium Processo	r), M.2		19.3 X 9.9 X 10.4 (nignest) (inch) (10uch) 17.3 / 7.85 Lift: 136mm;
Optical	Some: DVD-ROM S	ata 1.5gí	b/s Drivė, slim (9	.0mm)		,,		491 X 252 X 416 (highest) (mm) (Non-touch) 16.9 / 7.65 Swivel: +/-45°
Madia raadar	Some: DVD Burner (Optional 3-in-1 media			Drive, s	lim (9.0mm)		Power supply	150 watts, autosensing, 90% PSU
Media reader					D:		Limited warranty ³	
Graphics	Intel HD Graphics 6 external monitor supp			main me	emory, DirectX 1	2,	Limited Warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available
	Max resolution: 4096			(1080 (P	anel)@60Hz		Preload	Preloaded operating system
Display	21.5" (546.1mm) Ful	I HD 1080)p (1920x1080)	ΓFT cold	or, Borderless de	sign,		Some: Windows 10 Pro 64-bit
	MVA panel, widé viev	ving angle	e (+/- 89°), LED k	acklight	, 250 nits, 16:9 a	spect ratio,		Some: Windows 10 Home 64-bit
Multi-touch	1000:1 contrast ratio, Optional multi-touch,					hnology		Preloaded applications (only some listed)
Camera	Optional 1080p came	era, with d	ual microphone.	LED ind	icator, physical s	witch on/		Lenovo VantageMicrosoft Office preloaded; purchase a product key to activate
	off, supports multi-de	gree rotat	ion (horizontal 0	° to 180°	, vertical -25° to	25°)		Cyberlink PowerDVD (only for models with DVD / DVD±RW)
Controls	Physical buttons on s	ide for mi	crophone mute a	ind powe	er on/off			 Cyberlink Power2GO (only for models with DVD±RW)
Chipset	Intel B360 Chipset							LinkedIn
Rear ports*	Four USB 3.1 Gen1 (one supp	orts Smart Powe	r On), oi	ne ethernet (RJ-4	5),	Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,
	one DisplayPort, one	optional	serial (9-pin),		,	,		TCO AIO Computer certified, GREENGUARD® certified, TUV Eye comfort certified (for Full Function Monitor Stand only), TUV Low Blue Light certified,
Side ports*	one USB 3.1 Gen2 (d	ne is Alw	ays On and fast	charge),	one USB 3.1 Typ	e-C Gen 1,		TUV Ultra Low Noise certified (on some models), RoHS-compliant
	one optional card rea						MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,
M.2 card slot	* Depending on many fa Two M.2 Card slots (c	one for W	_AN, one for SSI	D/Optan	e iowei iliali illeore e)	lical speed	0, 20 1001	Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)
Audio support	High Definition (HD)						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
cappert	Dolby [®] Audio™ Premi					/,		
Note: The execition	ations above may not be		to all or of or a					Lenovo luna 2010













ThinkCentre M910z Platform Specifications

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



















ThinkCentre M920z Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	series	Audio support	High Definition (HD) Audio, Realtek ALC233 / two internal speakers (3W x 2),
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		Dolby® Audio™ Premium
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610	1	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Bluetooth™	Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM (Jacksonville), Wake on LAN®
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12.0 (Intel AMT 12.0);
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	-	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Caarreiter alain	adapter to enable vPro function through wireless connection)
	Core i5-8500	6/6	3.0G / 4.1G	9 MB 9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified Security slot (in rear for attachment of Power-on, admin, hard disk password)
	Core i5-8600 Core i7-8700	6/6 6/12	3.1G / 4.3G 3.2G / 4.6G	12 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630	Security features	optional Kensington® MicroSaver® cable; • Boot sequence control
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	-	Kensington lock also locks chassis) • Boot without keyboard and mouse
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400 DDR4-2400	UHD 630	-	 Smart USB protection, allows keyboard/ Individual USB port disablement
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices Optional Chassis intrusion switch
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	-	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630	1	Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
Memory	32GB max (16GB SC two 260-pin SO-DIMI * System clocks down for	M sockets or the proce	, dual-channel c essors with lower m	apable emory co	ntroller		Mechanical	Business black color Toolless back cover, stand, disk, memory removal Support VESA mount (100mm)
Storage	Some: Hard Drive / : HDDs (2nd F				support (RAID pr		,	Dimensions (WxDxH) Max weight (lb / kg) Adjustments
Optical	available via Some: Solid State D Some: M.2 SSD / PC * 128GB SSD M.2 (2242 Some: Intel Optanes Some: DVD-ROM S Some: DVD Burner	special bi rive (SSD Cle NVMe 2) PCle NV M Memory ATA 1.5G	d model) b) / SATA 6.0Gb/s c, PCle 3.0 x 4*, Me only supports f or (not support Ce b/s Drive, slim (S	s, 2.5" 32Gb/s PCIe 3.0 x eleron / F 9.0mm)	z 2, 16Gb/s Pentium Processo	·		Without stand (No camera): 21.3 X 1.8 X 13.7 (inch) 542 X 46 X 349 (mm) With Full Function Monitor stand (No camera): 21.3 X 9.9 X 15.9 to 20.2 (inch) 542 X 252 X 405 to 514 (mm) With UltraFlex III stand (No camera): With UltraFlex III stand (No camera):
Media reader	Optional 3-in-1 media	a card rea	der					21.3 X 9.9 X 14.3 to 17.5 (inch) (Touch) 19.7 / 8.94 Tilt: 70° back, -5° forward;
Graphics	Intel HD Graphics 6	10/630 in	processor, uses	main me	emory, DirectX® 1	2,		542 X 252 X 363 to 444 (mm) (Non-touch) 19.2 / 8.73 Lift: 136mm; Swivel: +/-45°
	external monitor supp Max resolution: 4096	oort via D	isplayPort™;				Power supply	150 watts, autosensing, 90% PSU
Display	23.8" (604.5mm) Full WVA panel, wide view	I HD 108	Op (1920x1080)	TFT cold	or , Borderless des		Limited warranty ³	3 Some: 1-year or 3-year, depot repair service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Multi-touch Camera	1000:1 contrast ratio, monitor via DisplayPo Optional multi-touch, Some: 1080p camer	anti-glare ort (DP in supports a, with du	e, support Low B / out combo) 10-point, AIT (A ial microphone, I	lue Light dvanced LED indic	t Mode, work as s In-cell Touch) tec cator, physical sw	tandalone hnology itch on/off,		Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
	supports mul Some: RGBIR came supports mul Windows Hel	ti-degree era, 1080p ti-degree llo suppor	rotation (horizon b, with dual micro rotation (horizon t, only available	tal 0° to phone, p tal 0° to via speci	180°, vertical -25° physical switch on 180°, vertical -25° al bid models	° to 25°) /off.		Lenovo Vantage Microsoft Office preloaded;purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW)
Controls	Physical buttons on s	ide for mi	crophone mute a	and powe	er on/off			• LinkedIn
Chipset	Intel Q370 Chipset						Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models), ErP Lot 3,
Rear ports*	Four USB 3.1 Gen1 (one DisplayPort in/ou	it combo	port, one optiona	ıl serial (9-pin)			TCO AlO Computer certified, GREENGUARD® certified, TUV Eye comfort certified, TUV Low Blue Light certified, TUV Ultra Low Noise certified (on some models), RoHS-compliant
Side ports*	one USB 3.1 Gen2 (cush 3.1 Type-C Gen combo jack (3.5mm)	1, one or	otional card read	er, one h	eadphone / micro	phone	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)
M.2 card slot	* Depending on many fa Two M.2 Card slots (ctors, actu	al data transfer spe LAN, one for SS	ed may b D/Optan	e lower than theoret e)	tical speed	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M600 Tiny Platform Specifications

Processor	Intel® Celeron® F	Processor	N3000 Series or	Intel Penti	ium® Processor	N3000 Series	Keyboard		B Keyboard (USB connector), Lenov	o logo	
	Processor	Cores / Threads	Frequency (Base/Max)	Cache	Memory Types	Integrated Graphics	Mayraa	Some: Lenovo USB Fing Some: Ultraslim Plus Wir	eceiver), black		
	Celeron N3050	2/2	1.6 / 2.16 GHz	2MB	DDR3L-1600	Intel HD	Mouse	Some: Enhanced Optical USB Mouse, black, Lenovo logo Some: Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black			
	Celeron J3060	2/2	1.6 / 2.48 GHz	2MB	DDR3L-1600	Intel HD 400	 Mechanical	• Tiny (1L), black color, m	<u> </u>	ivory, black	
	Pentium N3700		1.6 / 2.4 GHz	2MB	DDR3L-1600	Intel HD	Mechanica	Tilly (TE), black color, ill			
	Pentium J3710		1.6 / 2.64 GHz	2MB	DDR3L-1600				Dimensions (WxDxH)	Max weight (lb / kg)	
Chipset			C that integrates In es into a single s			ics, memory		M600 Tiny only (1L)	7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5mm	2.9 lb (1.3 kg)	
Graphics	Intel HD Graphic twoDisplayPort supports triple in	^и , one opti	essor, uses main ional 3rd DP (not	memory, D support D	DirectX® 11.1, P to HDMI donç	gle) or VGA,		M600 Tiny (1L) with VESA mount & ODD box	7.42" X 7.30" X 2.48" 188.4mm X 185.38mm X 63mm	4.12 lb (1.87 kg)	
	Maximum resolu 1920x1080(DP t	ution: 3840 to VGA do	0x2160(ĎP)@30H ngle)@60Hz; 192	Hz; 1920x1 20x1080(D	200(optional VOP to DVI dongle	GA)@60Hz; e)@60Hz;		M600 Tiny (1L) with VESA mount & I/O box	7.42" X 7.30" X 2.62" 188.4mm X 185.38mm X 66.6mm	3.53 lb (1.6 kg)	
Monitor cable	3840x2160(DP to V		ongle)@30Hz o DVI-D (single lir	nk), or DP	to HDMI 1.4 do	ngle	VESA mount Floor Stand	Optional VESA mount bra Optional system floor star	cket kit, supports VESA 75mm and for vertical orientation	100mm	
Memory	8GB max / DDR socket	3 Low Vol	tage, DDR3L-160	00, non-pa	rity, one 204-pir	SO-DIMM	Power supply		autosensing, 88% PSU (not include autosensing, 88% PSU (only for mo		
Storage	Some: 500GB NAND fl Some: Solid St Some: external	(5400 rpm lash mem ate Drive ODD box	r 7200 rpm, SATA n) Solid State Hyb ory, SATA 6.0Gb/s (SSD) / SATA 6.0 c with DVD-ROM, c with DVD±RW, 9	orid Drive (s, 2.5" wid Gb/s, 2.5" 9.5mm hig	SSHD) / with 80 e Wide gh, via USB	GB MLC	Limited warranty ³	, , ,			
Onboard SATA Media reader	Some: external Some:	ODD box	(for TIO) with DV (for TIO) with DV one connectors or	/D-ROM, 9 /D±RW, 9.	5mm high, via	USB JSB	Preload	Some: Windows® 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64-bit Some: Windows 7 Professional 64			
Front ports*	Two USB 3.0 (or	ne is Alwa	ys On and fast ch	narge), one	e microphone (s	tereo, 3.5mm)		Some: Windows 10 Pro Some: Windows 10 Hom	64-bit		
	one headphone	/ microph	one combo jack (stereo, 3.5	imm) .			Preloaded applications (o			
Rear ports*			0 (optional extern n some models),					 Desktop Power Manage 	er		
	one optional por	t (VGA, 3	rd DP, or serial or	n some mo	dels), one head	lphone		Lenovo Solution Center Lenovo BEACLIII	•		
I/O box*	Optional externa	al I/O box,	extends two USE	3 2.0, two l	USB 3.0, and or	ne serial on		Lenovo REACHitLenovo SHAREit			
	rear, two USB 2.	.0 on front	t, via USB (occup actual data transfe	y two spec	tific USB 3.0 of	M600 Tiny)		Lenovo Bluetooth Lock			
Audia augaart						·	-	McAfee® LiveSafe™ (30)			
Audio support			o, Realtek ALC22		•	er (1 watt)		 Microsoft Office preload purchase a product key 			
WLAN ¹³			2 Card, Realtek F 4.0 combo adapt		= (dual band),			PowerDVD Create (DVI)	D±RW)		
			2 Card, Qualcom		QCA9377 (dua	l band),		 Lenovo ThinkVantage T 	ools [′]		
	Wi-Fi + I	Bluetooth	4.1 combo adapt	er, 1x1	,	,,		- Only for Window 10	m10)		
	Some: 11ac wir	eless, M.2	2 Card, Qualcom	m Atheros	QCA6174 (dua	l band),		Lenovo Companion (WiCyberlink PowerDVD (D			
			4.1 combo adapt 2 Card, Intel Dual		eless-AC 3165			Lenovo QuickOptimizer			
	Wi-Fi + I	Bluetooth	4.0 combo adapt	er, 1x1	·			- Only for Window 7			
	Some: 11ac wir	eless, M.2	2 Card, Intel Dual	Band Wire	eless-AC 8260,			Rescue and RecoveryPassword Manager			
Bluetooth™			 4.1 combo adapt .1 wireless, integr 		i-Fi + BT combo	adanter		 Tassword Manager ThinkVantage System I 	Jodate		
Ethernet Modem	One gigabit ethe	ernet port,	Realtek RTL811	1GN, Wak	e on LAN®	auaptei		 Lenovo Message Cente Adobe® Reader® 			
Manageability Security chip	None Trusted Platform	n Module,	TCG 1.2-complia	nt			Environment	ENERGY STAR® 6.0*, EP GREENGUARD®; RoHS-0	EAT™ Gold rating* (*not for non-OS compliant; Cisco EnergyWise compa	models); atible; ErP Lot 3	
Security features	Kensington® N • Padlock loop • Smart USB pr	dicroSaver otection, a locks all st	[®] cable)	Hard disBoot seBoot witIndividu	strator password sk password quence control thout keyboard al USB port dis s intrusion switch	and mouse ablement	Accessories	For compatible accessorie	es, please go to TC-AQP sheet		
Na faataataa fau u							•			anava Navanskar O	













ThinkCentre M600 Tiny Thin Client Platform Specifications

Processor	Intel® Celeron® Processor N3000 Series or Intel Pentium® Processor N3000 Series	Keyboard	Some: PS/2 Keyboard (PS/2 connector), Lenovo logo (for 2L models)				
	Processor Cores / Threads Frequency (Base/Max) Cache Memory Types Integrated Graphics Celeron N3000 2 / 2 1.04 / 2.08 GHz 2MB DDR3L-1600 Intel HD Celeron N3010 2 / 2 1.04 / 2.24 GHz 2MB DDR3L-1600 Intel HD 400	Mouse	Some: Preferred Pro USB Keyboard (USB connector), Lenovo logo Some: Ultraslim Plus Wireless Keyboard (2.4GHz via USB receiver), black Some: PS/2 Optical Wheel Mouse, black, Lenovo logo (for 2L models) Some: Enhanced Optical USB Mouse, black, Lenovo logo Some: Ultraslim Plus Wireless Mouse (2.4GHz via USB receiver), black				
Chipset	Intel Architecture (IA) SoC that integrates Intel processor core, graphics, memory controller, and I/O interfaces into a single system-on-chip solution	Mechanical	• Tiny (1L or 2L), black color, metal case				
Graphics	Intel HD Graphics in processor, uses main memory, DirectX® 11.1,		Dimensions (WxDxH) Max weight (lb / kg)				
	twoDisplayPort™, one optional 3rd DP (not support DP to HDMI dongle) or VGA, supports triple independent display;		M600 Tiny only (1L) 7.05" X 7.20" X 1.36" 2.9 lb (1.3 kg) 179mm X 182.9mm X 34.5mm				
	Maximum resolution: 3840x2160(DP)@30Hz; 1920x1200(optional VGA)@60Hz; 1920x1080(DP to VGA dongle)@60Hz; 1920x1080(DP to DVI dongle)@60Hz; 3840x2160(DP to HDMI dongle)@30Hz		M600 Tiny only (2L) 7.05" X 7.20" X 3.15" 4.2 lb (1.9 kg) 179mm X 182.9mm X 80mm				
Monitor cable	Optional DP to VGA, DP to DVI-D (single link), or DP to HDMI 1.4 dongle	VESA mount	Optional VESA mount bracket kit, supports VESA 75mm and 100mm				
Memory	and the state of t	Floor Stand	Optional system floor stand for vertical orientation				
Storage	16GB 32GB or 128GB M 2 Solid State Drive (SSD) SATA interface	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)				
Optical Onboard SATA Media reader	None SATA 6.0Gb/s controller, one connectors on planar None	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available Some: 3-year, limited onsite service, OID (Onsite International Delivery) / service upgrades available				
Front ports*	Two USB 3.0 (one is Always On and fast charge), one microphone (stereo, 3.5mm),		For Lenovo service upgrade options, please go to S-TC sheet				
Rear ports*	one headphone / microphone combo jack (stereo, 3.5mm) Two USB 2.0, two USB 3.0, ethernet (RJ-45), two DisplayPort, one optional port (VGA, 3rd DP, or serial on some models), one headphone; additional four serial (9-pin), one parallel (25-pin), and two PS/2 ports on 2L models *Depending on many factors, actual data transfer speed may be lower than theoretical speed None	Preload	Some: Windows Embedded Standard 7 (WES 7) Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS (Lenovo Terminal Operating System, Linux-based) Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)				
Audio support		Environment	ENERGY STAR® 6.0*, EPEAT™ Gold rating* (*not for non-OS models);				
WLAN¹³	Some: 11ac wireless, M.2 Card, Realtek RTL8821AE (dual band), Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.0 combo adapter, 1x1 (only for 1L models) Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter	Accessories	GREENGUARD®; RoHS-compliant; Cisco EnergyWise compatible; ErP Lot 3 For compatible accessories, please go to TC-AQP sheet				
Ethernet Modem Manageability	One gigabit ethernet port, Realtek RTL8111GN, Wake on LAN® None						
Security chip	Trusted Platform Module, TCG 1.2-compliant						
Security features	 Security slot (in rear for optional Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ mouse only, blocks all storage devices Power-on password Administrator password Boot sequence control Boot without keyboard and mouse Individual USB port disablement Chassis intrusion switch 		Langua November 2017				













ThinkCentre M625 Tiny Platform Specifications

Processor	AMD A9 series	APU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo			
	ADII		Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo			
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), black color; metal case • Toolless chassis open (for models with optional toolless chassis screw)			
	A9-9420e	2	1.8 / 2.7 GHz	1 MB	DDR4-1866	Radeon R5 Series		Toolless HDD, SSD, memory, Wi-Fi removal			
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower cap	pability of memory		Optional dust filter M625 Tiny only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H			
Disk	Some: SATA 6.0 Some: 128GB N Some: 256GB N	1.2 Solid	State Drive (SS	D) / PC	le NVMe interl	ace	VESA mount Floor Stand	2.9 lb (1.3 kg), weight may vary by configuration Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			
Optical Onboard SATA	None one SATA 6.0Gb	/s conne	ctor on planar				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)			
Media reader	None		·				Limited warranty ³	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available			
Graphics	AMD Radeon™ Graphics in processor, uses main memory, DirectX® 12, two DisplayPort™, one optional port (VGA or USB 2.0 Type-C with DisplayPort Alterna Mode), supports up to 2 independent displays; Max resolution: 3840x2160 (DP)@60Hz; 2048x1280 (VGA)@60Hz; 3840x2160 (USB 2.0 Type-C)@60Hz						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	10) 4 1	D !! ! A! O!	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: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: Bluetooth 4.2* wireless, integrated in Wi-Fi + BT combo adapter * Win 10 RS3 and Win10 earlier version only support Bluetooth 4.1						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	Gigabit ethernet, None	Realtek	earlier version (RTL8111HN, V	Vake on	port Bluetooth LAN®	4.1	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Manageability Security chip Security features	None Discrete TPM 2.0 Security slot (ir Kensington® M Smart USB pro mouse only, blo Power-on pass	rear for icroSave otection, ocks all s	optional r® cable) allows keyboard	 Har Boo Boo Indi 		ord ontrol oard and mouse ort disablement					













ThinkCentre M625 Tiny Thin Client Platform Specifications

Processor	AMD E2 series A	\PU					Keyboard	Some: Fullsize USB Keyboard (USB connector), black, Lenovo logo			
	APU	Coros	Frequency	L2	Memory	Integrated	Mouse	Some: USB Optical Wheel Mouse, black, Lenovo logo			
	APU	Cores	Base/Max	Cache	Support (Up to)	Graphics	Mechanical	Tiny (1L), fan-less design, black color, metal case Toolless chassis open (for models with optional toolless chassis screw)			
	E2-9000e	2	1.5 / 2.0 GHz	1 MB	DDR4-1866	Radeon R2 Series		Toolless SSD, memory, Wi-Fi removal			
Memory	8GB max, DDR4 * System frequer controller in proc	ncy autor	ne 260-pin SO- natically clocks	DIMM so down fo	ocket r the lower ca	pability of memory		M625 Tiny Thin Client only: 7.05" W X 7.20" D X 1.36" H 179mm W X 182.9mm D X 34.5mm H 2.9 lb (1.3 kg), weight may vary by configuration			
Disk	Some: 32GB M. Some: 128GB N					face	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation			
Optical Onboard SATA Media reader	None one SATA 6.0Gb None	/s conne	ctor on planar				Power supply Limited warranty ³	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models) 3 Some: 1-year, depot service / service upgrades available			
Graphics	AMD Radeon™	Graphic	s in processor	uses ma	in memory Di	rectX® 12 two	Limited Warranty	Some: 1-year, limited onsite service / service upgrades available			
·	DisplayPort™, on Mode), supports Max resolution: 3	ne option up to 2 i 3840x216 3840x216	al port (VGA or ndependent dis 60 (DP)@60Hz; 60 (USB 2.0 Typ	USB 2.0 plays; 2048x1; pe-C)@6) Type-C with I 280 (VGA)@6 0Hz	DisplayPort Alternate 0Hz;	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)			
Monitor cable Chipset	Optional DP to V	Optional DP to VGA, DP to DVI-D (single link), or DP to HDMI 1.4 dongle						ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*Not for non-OS models), ErP Lot 3, RoHS-compliant, WEEE, TCO			
Front ports*	Two USB 3.1 Ge	n1 (one				icrophone (3.5mm),	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock,			
Rear ports*	one headphone / One USB 3.1 Ge two optional port	n1, three	e USB 2.0, ethe	rnet (RJ	-45), two Disp	layPort, th DisplayPort	Accessories	Fungus, Solar Radiation) For compatible accessories, please go to http://smartfind.lenovo.com			
	Alternate Mode),	Port 2 fo	or serial)		, ,	han theoretical speed	Accessories	To companie accessing, prease go to map.//smartima.ionove.com			
I/O box	None		,, aotaar aata train		2ay 20 .0	a.r arooroaoa. opoou					
Audio support			,			speaker (1.5 watt)					
WLAN ¹³	Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E Some: 11ac wire Wi-Fi + E	Bluetooth eless, M. Bluetooth eless, M. Bluetooth eless, M. Bluetooth	4.2* combo ad 2 Card, Qualco 4.2* combo ad 2 Card, Realtel 4.2* combo ad 2 Card, Qualco 4.2* combo ad	lapter, 1) mm Atholiapter, 1) k RTL883 lapter, 2) mm Atholiapter, 2)	c1 `eros QCA9377 c1 22BE (dual ba c2 eros QCA6174 c2	7 (dual band), nd), 4A (dual band),					
Bluetooth™	Some: Bluetooth * Win 10 RS3 and	n 4.2* wi	reless, integrate	ed in Wi-	Fi + BT combo						
Ethernet Modem	Gigabit ethernet, None										
Manageability Security chip		Discrete TPM 2.0, TCG Certified									
Security features	Security slot (in Kensington® M Smart USB pro mouse only, blo Power-on pass	icroSave otection, ocks all s	r® [·] cable) allows keyboard	 Hai Boo Boo Indi 	ministrator pas rd disk passwo ot sequence co ot without keyb ividual USB po assis intrusion	ord ontrol ooard and mouse ort disablement					



















ThinkCentre

ThinkCentre M630e Tiny Platform Specifications

Processor	Intel® Pentium®, or 8th	Generat	ion Intel Core™	i3 / i5 Pı	rocessor		Manageability	None							
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support	Integrated Graphics	Security chip	Firmware TF	PM 2.0, integra	ated in chips					
	Pentium Gold 5405U	2/4	2.3G	2 MB	(Up to) DDR4-2133	UHD 610	Security leatures	 Security s Kensington 				 Boot sequence control Boot without keyboard and mouse 			
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2400	UHD 620		 Chassis intrusion switch Individual USB port of the control of the con				port disablement			
	Core i5-8265U	4/8	1.6G / 3.9G	6 MB	DDR4-2400	UHD 620		Power-on Advairage transport				ection, allows keyboard/			
Memory	16GB max, DDR4-266 * System automaticall	66*, one 2	260-pin SO-DIM	M socke	ets, non-ECC	ory controlle		 Administrator password Hard disk password Some: Lenovo Calliope Keyboard (USB connector), black 							
Storage	Some: Hard Drive / S					ory controller	Keyboard Mouse					•			
Onboard SATA	Some: Solid State Dr Some: M.2 SSD (228 Some: M.2 SSD (224 One onboard SATA 6.	rive (SSD 80) / PCle 82) / PCle) / SATA 6.0Gb/s NVMe, PCIe 3. NVMe, PCIe 3.	s, 2.5" 0 x 4, 32	2Gb/s		Mechanical	Some: Lenovo Calliope Mouse (USB connector), black Tiny (1L), black color; metal case Optional dust filter One 2.5" bay for HDD/SSD, two M.2 slots (one for WLAN, one for M.2 SSD)			N, one for M.2 SSD)				
Graphics	Intel HD Graphics 61	0/620 in	processor uses	main m	emory DirectX®	12 one	1			Dimension	ns (WxDxH)	Weight (Approx.)			
·	DisplayPort™, one HD Max resolution: 4096x	MI, up to 2304 (DF	2 independent (P)@60Hz; 4096x	displays 2304 (H	,	12, 0110		Tiny only	17		.20" X 1.36" .9mm X 34.5mm	2.91 lb (1.32 kg), vary by config			
Monitor cable	Optional DP to VGA d	ongle or	DP to HDMI 1.4	dongle	,		VESA mount	None							
Chipset	Intel SoC (System or	n Chip) p	latform				Floor Stand	Optional system floor stand for vertical orientation							
Front ports* (Std.)	One USB 3.1 Gen1, o				nicrophone (3.5m	nm),	Power supply	Some: 65 watts adapter, autosensing, 88% PSU							
Rear ports* (Std.) Rear ports* (Opt.)	one headphone / micr Two USB 3.1 Gen1, to None	ophone o vo USB 2	combo jack (3.5n d.0, one ethernet	nm) : (RJ-45)), one DisplayPor	rt, one HDM	Limited warranty	Some: 1-year, depot service / service upgrades available Some: 1-year, limited onsite service / service upgrades available				lle s available			
	* Depending on many fac	ctors, actua	al data transfer spe	ed may b	e lower than theore	etical speed	Preload	reload Preloaded operating system							
Audio support	Realtek ALC233VB / i	nternal s	peaker (1.5 watt))]	Some: Win	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit						
WLAN	Some: 11ac wireless,				(dual band),		1	Preloaded applications (only some listed)							
	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1							Lenovo Vantage Microsoft Office preloaded; purchase a product key to activate							
								LinkedIn							
	Some: 11ac wireless		ess-AC 8265,		Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating, ErP Lot 3, TCO, RoHS-compliant, WEEL, REACH									
Bluetooth	Some: Bluetooth 4.2			-Fi + BT	combo adapter		MIL-SPEC test	Coming soon							
Ethernet Ethernet (Opt.)	Gigabit ethernet, Real None	itek HTL	3111HN-CG				Accessories	For compati	ible accessorie	s, please go	to http://smartfind	d.lenovo.com			

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













ThinkCentre M710 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5	/ i7 Processor	r Security features	Security features • Security slot (in rear for optional • Power-on password				
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)		Coounty Touristo	Kensington® MicroSaver® cable) • Padlock loop	Administrator password Hard disk password			
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ 	Boot sequence control			
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		 mouse only, blocks all storage devices Optional cable lock to physically lock 	Boot without keyboard and mouseIndividual USB port disablement			
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		both keyboard and mouse	Optional chassis intrusion switch			
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB co				
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530	110,000.0	Some: Lenovo Traditional Keyboard (USB	connector), black			
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530	Mouse	Some: Lenovo Calliope Wireless Keyboar	d (2.4GHz via USB receiver), black			
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB conr Some: Lenovo Calliope Wireless Mouse (2				
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630	Machanical	• SFF (8.4L), black color; metal case	2. TGT 12 VIG GGB 10001V01), SIGGR			
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mechanical	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm >	(290.5mm X 343.5mm			
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		 Approx. 13.2 lb (6.0 kg), weight may vary 				
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630		 Toolless cover, disk, optical removal 				
Memory	64GB max, UDIMN dual-channel capa * System automati	ble*			•		r	 Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional b. 	av)			
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" IVMe, P	Cle 3.0 x 4, 32Gb	/s		Slot 1: low-profile (length < 150mm, height 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 1.5G	(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 омог одрргу	Some: 180 watts, autosensing, 85% PS 210 watts, autosensing, 85% PS 210 watts, autosensing, 92% PS 210 watts, autosensing, 92% PS 25ome: 1-year or 3-year, depot service / 1-year or 3-year, limited onsite states.	U (only available via special bid) service upgrades available			
Monitor cable	Max resolu Optional DP to VG	<i>tion:</i> 3840 A, DP to I	0x2160 (DisplayP DVI-D (single link	ort)@60 (), DP to	Hz; dual DP, or DP to	HDMI 1.4	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64				
Chipset	Intel B250 Chipse	et						preinstalled through downgrade				
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	models			listed)				
Rear audio ports?	Line-in (3.5mm), lii	ne-out (3.	5mm), micropho	ne-in (3.	ōmm)			 Microsoft Office preloaded; 				
ILLL 1004	None * Depending on many	v factors av	rtual data transfer s	eneed ma	, he lower than theo	retical speed		purchase a product key to activate				
Audio support	High Definition (HI				·		1	Only for Window 10Lenovo Companion				
WLAN ¹³	Some: 11ac wirele	, .				,	+	- Only for Window 7				
VVL/AIN			1 combo adapte		QUASSITA (uua	i bailu),		Lenovo Solution Center Lenovo Think/Ventego Teolo				
	Some: 11ac wirele	ess, M.2 (Card, Qualcomm	Atheros	QCA6174A (dua	l band),		Lenovo ThinkVantage ToolsCreate Recovery Media				
			1 combo adapte		ologo AC 0165			Adobe® Reader®				
	Some: 11ac wireld Wi-Fi + Blu		zard, intel Dual E 1 combo adaptel		eless-AC 3165,			Cyberlink PowerDVD Create				
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Sand Wir r. 2x2	•		Environment	(DVD±RW) ENERGY STAR® 6.1, EPEAT™ Gold rating	(North America),			
Bluetooth™	Some: Bluetooth	4.1 wirele	ss, integrated in '	Ŵi-Fi + E	T combo adapte	r		ErP Lot 3, GREENGUARD®, RoHS-compli	ant,			
Ethernet	Gigabit ethernet, F	Realtek R	L8111GN, Wake	on LAN	(B)			TUV low noise verified (on some models)				
Modem	None						Accessories	For compatible accessories, please go to	http://www.lenovoquickpick.com			
Manageability Security chip	None TPM (Trusted Platt * Downgrade to TF				G Win7 32 OS							













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

See footnotes for more detailed information













ThinkCentre M710 Tower Platform Specifications

Processor	Intel® Celeron®, Int	el Pentiur	m®, or 6/7th Gene	eration Ir	ntel Core™ i3 / i5 /	i7 Processor	Manageability	None
	Processor	Cores /	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)		Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510	Security features	• Security slot (in rear for optional • Power-on password
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610		Kensington® MicroSaver® cable) • Administrator password
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630		 Padlock loop Smart USB protection, allows keyboard/ Boot sequence control
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		mouse only, blocks all storage devices • Boot sequence control • Boot without keyboard and mouse
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 Optional cable lock to physically lock Individual USB port disablement
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		both keyboard and mouse • Optional chassis intrusion switch
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Some: Lenovo Traditional Keyboard (USB connector), black
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Mechanical	Tower (15L), black color, metal case
Memory	64GB max, UDIMN dual-channel capal * System automatic	ble cally clock	ks down for the p	rocessor	rs with lower mem	ory controller		 (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter Bay 1: Slim external ODD bay
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S Some: Intel Optan	Drive (St State Driv	SD) / SATA 6.0GI e (SSD) / PCIe N	b/s, 2.5" IVMe, P0	Cle 3.0 x 4, 32Gb/	's		Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 3.5", 1" high, internal, HDD/SSD Slot 1: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1*
Optical	Some: DVD-ROM Some: DVD Burne	SATA 1.5	Gb/s Drive, slim	(9.0 mm))			Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1* Slot 4: no slot, only bracket for optional port extension*
Onboard SATA Media reader	Three onboard SA Optional 7-in-1 me				. ,			M.2 card slots: Two (one for WLAN, one for SSD/Optane) * Optional 2 front USB3.1 Type-C ports module occupies PCIe x16 slot (x4 card)
Graphics	Intel HD Graphics							optional rear 2x USB2.0 / parallel occupies one expansion slot
	one VGA, two Disp discrete graphics to Max resolution: 409 Some: NVIDIA Ge	o support 96x2304 (more displays; (DP)@60Hz; 204	8x1536	(VGA)@50Hz		Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)
	two Display <i>Max resolu</i> :	Port, 35 v <i>tion:</i> 3840	vatts;)x2160 (DisplayP	ort)@60	Hz;	- ,	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
		ne HDMI	, 75 watts, occup	ies two s		985Hz	Preload	Preloaded operating system Some: Windows® 7 Professional 32/64 listed) Preloaded applications (only some listed)
Monitor Cable	Optional DP to VG	A, DP to I						preinstalled through downgrade • Microsoft Office preloaded; rights in Windows 10 Pro 64-bit purchase a product key to activate
Chipset Front ports*	Four USB 3.1 Gen		ol two LICE 2.1 To	ma C Cc	on 2 (only ovoilable	a via aposial		(not available with 7th Gen Intel - Only for Window 10 processor) • Lenovo Companion
	bid), microphone (3 Two USB 3.1 Gen1	3.5mm), h	eadphone (3.5m	im)				Some: Windows 10 Pro 64-bit - Only for Window 7 Some: Windows 10 Home 64-bit - Lenovo Solution Center
Rear ports*	serial (9-pin), optio two PS/2 ports (key	nal parall yboard/m	el (25-pin), ether ouse);	net (RJ-	45), one VGA, two	DisplayPort,		 Lenovo ThinkVantage Tools Create Recovery Media Adobe® Reader®
Rear audio ports* IEEE 1394*	additional VGA, Dis Line-in (3.5mm), lir None	ne-out (3.	5mm), microphoi	ne-in (3.5	5mm)	oueis		 Cyberlink PowerDVD Create (DVD±RW)
	* Depending on many	/ factors, ac	ctual data transfer s	speed may	be lower than theor	retical speed	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America),
Audio support	High Definition (HD) Audio, I	Realtek ALC662	/ optiona	al internal speaker	(1.5 watt)]	ErP Lot 3, GREENGUARD®, RoHS-compliant, TUV low noise verified (on some models)
WLAN ¹³	Some: 11ac wirele				QCA9377A (dual	band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
	Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2						Accessories	roi companible accessories, please go to mtp.//www.ieriovoquickpick.com
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.1 combo adapter, 1x1							
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.1 combo adapter, 2x2							
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111GN, Wake on LAN® None				BT combo adapter			
							I	













ThinkCentre M710e SFF Platform Specifications

Processor	Intel® Celeron®, Int			eration I	1		Security features	 S • Security slot (in rear for optional Kensington® MicroSaver® cable) • Power-on password • Administrator password 		
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics		 Padlock loop Hard disk pa 	assword	
	Celeron G3900	2/2	2.8G	2 MB	DDR4-2133	HD 510		 Smart USB protection, allows keyboard/ Boot sequer mouse only, blocks all storage devices Boot withou 	nce control t keyboard and mouse	
	Celeron G3930	2/2	2.9G	3 MB	DDR4-2133	HD 610		Optional smart cable clip to physically Individual U	SB port disablement	
	Pentium G4400	2/2	3.3G	3 MB	DDR4-2133	HD 510		lock both keyboard and mouse Optional cha	assis intrusion switch	
	Pentium G4500	2/2	3.5G	3 MB	DDR4-2133	HD 530	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black	k	
	Pentium G4560	2/4	3.5G	3 MB	DDR4-2400	HD 610	l., '	Some: Lenovo Traditional Keyboard (USB connector), bla	ack	
	Pentium G4600	2/4	3.6G	3 MB	DDR4-2400	HD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black	المساح المالم مسمم المالم	
	Core i3-6100	2/4	3.7G	3 MB	DDR4-2133	HD 530		Some: Lenovo Fingerprint Mouse (USB connector), Wind	Jows Hello Support, blac	
	Core i5-6400	4/4	2.7G / 3.3G	6 MB	DDR4-2133	HD 530	Mechanical	SFF (7.4L), black color, metal case (Market 10.2 Market 1	70	
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530		 (WxDxH) 3.9" X 11.9" X 10.8"; 100mm X 303.5mm X 27 Approx. 9.37 lb (4.25 kg), weight may vary by configurate 		
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530		Bay 1: Slim external ODD bay	lion	
	Core i3-7100	2/4	3.9G	3 MB	DDR4-2400	HD 630		Bay 2: 3.5", 1" high, internal, supports 2.5" or 3.5" HDD/S	SD (2.5 to 3.5 bracket	
	Core i3-7300	2/4	4.0G	4 MB	DDR4-2400	HD 630		comes with disk)		
	Core i5-7400	4/4	3.0G / 3.5G	6 MB	DDR4-2400	HD 630		Slot 1: low-profile (length < 152mm, height < 64mm), PCIe Slot 2: low-profile (length < 152mm, height < 64mm), PCIe		
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630		M.2 card slots: one for SSD	6 3.0 X I	
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630		*Optional rear 2x USB2.0 / parallel occupies one expansion	on slot	
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630	Floor Stand	Optional system floor stand for vertical orientation		
Memory	32GB max, UDIMN dual-channel capa	bĺe	, ,		,	,	Packaging	 (WxDxH) 7.7" X 15.4" X 19.7"; 195mm X 390mm X 500 Cross weight (approx.) 14.22 lb (6.45 kg) 	mm	
	*System automatic						Power supply	Some: 180 watts, autosensing, 85% PSU		
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	/ SATA 6 Drive (S	.0Gb/s, 2.5" or 3. SD) / SATA 6.0Gl	.5", 5400 b/s, 2.5"	or 7200 rpm	/s	Limited warranty ³	Some: 1-year or 3-year, depot service / service upgrad Some: 1-year or 3-year, limited onsite service / service		
Optical	Some: DVD-ROM	SAIA 1.	oGb/s Drive, slim	(9.0mm)	3	Preload	Preloaded operating system		
Onboard SATA	Some: DVD Burne Two onboard SATA			b/s Drive	e, slim (9.0mm)			Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit		
Media reader	Optional 7-in-1 me							Some: Windows 10 Floring 04-bit Some: Windows 7 Professional 32/64 preinstalled through	ah downarade rights	
Graphics	Intel HD Graphics			essor us	ses main memory	DirectX® 12	1	in Windows 10 Pro 64-bit(not available with 7th G	ien Intel processor)	
атартноо	one VGA, one Disp	layPort™	, supports 2 inde	pendent	displays, works a	long with		Preloaded applications (only some listed)	, ,	
	discrete graphics to	o support	more displays;			· ·		Microsoft Office preloaded; numbers a product kny to activate.		
	Max resolution: 40							purchase a product key to activateCyberlink PowerDVD (DVD, DVD±RW)		
	Some: NVIDIA Ge two Display			2, 2GB, I	Cie 2.0 x8 adapti	er,		Cyberlink PowerDVD Create (DVD±RW)		
)x2160 (DisplayP	ort)@60	Hz:			- Only for Window 10		
Monitor cable	Optional DP to VG					HDMI 1.4		Lenovo Companion Cally for Window 7		
Chipset	Intel B250 Chipse	t					1	Only for Window 7Lenovo Solution Center		
Front ports*	Two USB 3.1 Gen1	microni	none (3.5mm), or	ne headr	phone / microphon	e combo jack		Lenovo System Update		
rioni porto	(3.5mm)	i, iiiloropi	10110 (0.011111), 01	ic ricadp	mone / morephen	ie dombo jadi		Create Récovery Media		
Rear ports*	Two USB 3.1 Gen1	, two US	B 2.0, optional tw	o USB 2	2.0, serial (9-pin),	optional 2nd		Adobe® Reader®		
	serial (9-pin), optio optional external U	SB to PS	5/2 ports cable (fo	or PS/2 k	(eyboard / mouse	e DisplayPort. ;	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North Americ RoHS-compliant, WEEE	ca), ErP Lot 3,	
Daan avalla saast s	additional DisplayF		tional graphics o	n some	models		Accessories	For compatible accessories, please go to http://www.lene	ovoguicknick.com	
Rear audio ports* IEEE 1394*	Line-out jack (3.5m	ım)					710000001100	To companie accessories, produce go to nitp://www.ici i	ovoquiokpiok.com	
IEEE 1394*	None * Depending on many	factors a	otual data transfor s	spood ma	y bo lower than thee	ratical speed				
Audio support	High Definition (HD				•	<u> </u>	-			
WLAN ¹³		, Audio,	I IGAIIGN ALUZ33	, miema	u speaket (1.5 Wat	,	-			
	None None									
Rhietooth™		Paltak R	ΓL8111HN, Wake	on LAN	J ®					
Bluetooth™ Ethernet	Gigabit ethernet. H	icalick i i					1			
	None	icanek i i	0 ,							
Ethernet		leaner i					_			













ThinkCentre M715 SFF Platform Specifications

						lo "				
Processor	AMD A6 / A8 / A10 / A1			/ 5 / 7 series	·	Security features	Security slot (in rear for optional Power-on password Administrator password Administrator password			
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics		 Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/ Administrator password Hard disk password Boot sequence control 			
	Ryzen 3 PRO 1200	4 / 4	3.1 / 3.4	2MB	None		mouse only, blocks all storage devices • Boot sequence control • Boot sequence control • Boot without keyboard and mouse			
	Ryzen 3 PRO 1300	4 / 4	3.5 / 3.7	2MB	None		Optional cable lock to physically lock Individual USB port disablement			
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		both keyboard and mouse Optional chassis intrusion switch			
	Ryzen 7 PRO 1700	8 / 16	3.0 / 3.7	4MB	None	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	PRO A6-8570	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Traditional Keyboard (USB connector), black			
	PRO A10-8770	4 / 4	3.5 / 3.8	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
	PRO A8-9600	4 / 4	3.1 / 3.4	2MB	Radeon R7 Series	Mechanical	SFF (8.4L), black color; metal case			
	PRO A10-9700	4 / 4	3.5 / 3.8	2MB	Radeon R7 Series	Moonanicai	• (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm			
	PRO A12-9800	4 / 4	3.8 / 4.2	2MB	Radeon R7 Series		 Approx. 13.2 lb (6.0 kg), weight may vary by configuration 			
Memory	64GB max, UDIMM, DI dual-channel capable* * System automatically	clocks down	for the proces	sors with low	er memory controller		Toolless cover, disk, optical removal Optional dust filter Bay 1: Slim external ODD bay Bay 2: 3.5", nternal, HDD/SSD			
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	re (SSD) / Ś/	ATA 6.0Gb/s, 2.	5" ່	'		Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16* Slot 2: low-profile (length < 150mm, height < 68mm), PCle 2.0 x1*			
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), SA	ATA 1.5Gb/s Dr		mm)		Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1* Slot 4: no slot, only bracket for optional port extension*			
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader				_	M.2 card slots: two (one for WLAN, one for SSD) * Optional front USB3.1 Type-C x2 module occupies PCIe x16 slot (x4 card), optional rear 2x USB2.0 / parallel / 2nd serial occupies one expansion slot			
Graphics	AMD Radeon™ Graph memory, DirectX® 12, c	ics in proce	ssor (not for A DisplayPort™	MD Ryzen p (Onboard VC	rocessor), uses main AA and DP ports	Floor Stand	Optional system floor stand for vertical orientation			
	are invalid on the mode displays, works along v Max resolution: 4096x2 Some: NVIDIA Gefore	els with AMD vith AMD dis 160 (DP)@6	Ryzen process crete graphics 1 30Hz: 1920x120	sor), supports to support m 10 (VGA)@6	s 3 independent ore displays; 0Hz	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)			
	two DisplayPort Max resolution:	, 35 watts; 3840x2160	(DisplavPort)@	60Hz:		Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	Optional DP to VGA, D	P to DVI-D (s	single link), DP	to dual DP, c	or DP to HDMI 1.4	Preload	Preloaded operating system			
Chipset	AMD B350 Chipset						Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (Only available with Pro A6/A10/A12-8xxx APUs)			
Front ports*	Two USB 3.1 Gen2, two available via special bid	o USB 3.1 G d), microphor	en1, optional tv ne (3.5mm), he	vo USB 3.1 T adphone (3.5	Type-C Gen 2 (only 5mm)		Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit			
Rear ports*	Two USB 3.1 Gen1, two	USB 2.0, o	ptional two US	B 2.0, serial	(9-pin), optional		Preloaded applications (only some listed)			
	2nd serial (9-pin), optio DisplayPort (not availab	nai parailei (de on model	25-pin), etnern s with AMD Rv	et (HJ-45), 0 zen processo	ne vGA and two or), two PS/2 ports		Microsoft Office preloaded;			
	(keyboard / mouse);	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	o with the ray	Lon process	51), two 1 6/2 ports		purchase a product key to activate - Only for Window 10			
	àdditional DisplayPort	on optional g	raphics on som	e models			Lenovo Companion			
Rear audio ports	Line-in (3.5mm), line-or	ut (3.5mm), r	nicrophone-in (3.5mm)			- Only for Window 7			
IEEE 1394*	None * Depending on many factor	ors. actual data	a transfer speed i	nav be lower t	han theoretical speed		 Lenovo Solution Center Lenovo ThinkVantage Tools 			
Audio support	High Definition (HD) Au				· · · · · · · · · · · · · · · · · · ·	1	Create Recovery Media			
WLAN	Some: 11ac wireless,			IAE (dual ba	nd),	1	 Adobe® Reader® Cyberlink PowerDVD Create (DVD±RW) 			
	Wi-Fi + Bluetoo Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, Q	ualcomm Ather	os QCA6174	A (dual band),	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant			
	Some: 11ac wireless, Wi-Fi + Bluetoc	M.2 Card, Quality of the 4.1 comb	ualcomm Ather o adapter, 1x1		, , , , , , , , , , , , , , , , , , , ,	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com			
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 o Gigabit ethernet, Realte None	r 4.1 wireles	s, integrated in		combo adapter					
Manageability Security chip	DASH TPM (Trusted Platform * Downgrade to TPM1.2									













ThinkCentre M715 Tiny Platform Specifications

Processor	AMD A6, A10, or	A12 ser	ries APUs				Keyboard	Some: Fullsize USB Keyboard (USB connector), Lenovo logo
	APU	Cores	Frequency Base/Max	L2 Cache	Memory Types	Integrated Graphics	Mouse	Some: Lenovo New Slim USB Keyboard (USB connector), black, Lenovo logo Some: USB Optical Wheel Mouse, black, Lenovo logo
	PRO A6-9500E	2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5 Series	Mechanical	Tiny (1L), black color; metal case
	PRO A10-9700E	4	3.0 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7 Series		M715 Tiny only: 7.05" W X 7.20" D X 1.36" H
	PRO A12-9800E	4	3.1 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series		179mm W X 182.9mm D X 34.5mm H
	PRO A6-8570E	2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5 Series		2.9 lb (1.3 kg), weight may vary by configuration
	PRO A10-8770E	4	2.8 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7 Series		With VESA mount & ODD box:
	PRO A12-8870E	4	2.9 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series		7.42" W X 7.30" D X 2.48" H 188.4mm W X 185.38mm D X 63mm H
Memory	32GB max, DDR- *16GB single SO							4.12 lb (1.87 kg), weight may vary by configuration With VESA mount & I/O box:
Disk	Some: SATA 6.0 Some: Solid Sta	te Drive	(SSD) / SATA 6	.0Gb/s,	2.5"	D/A/a intenfere		7.42" W X 7.30" D X 2.62" H 188.4mm W X 185.38mm D X 66.6mm H 3.53 lb (1.6 kg), weight may vary by configuration
Optical	Some: M.2 Solid Some: DVD-ROI Some: DVD±RW	M, 9.0mı	m high, viá USE	3 externa	al ODD box	IVMe interface	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm and 100mm Optional system floor stand for vertical orientation
Onboard SATA Media reader	One SATA cable None	(1-drop 1	to device), one	SATA 6.0	OGb/s connect		Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models) 90 watts AC/DC adapter, autosensing, 88% PSU (only for models with I/O box)
Graphics		e option	al port (HDMI, \	/GA, or 3	3rd DP), suppo	orts 3 independent	Limited warranty ³ Preload	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
	port or DP to DVI Max resolution: 4	isplays (supports maximum of 2 concurrent HDMI/DVI displays when using HE ort or DP to DVI/HDMI dongles); flax resolution: 4096x2160 (DP)@60Hz; 4096x2160 (HDMI)@30Hz;						Preloaded operating system Some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit - Windows 10 only
DP cable	Optional DP to V	920x120 GA, DP	00 (VGA)@60H to DVI-D (single	z e link), or	DP to HDMI 1	1.4 dongle		Some: Windows® 7 Professional 64 • Lenovo Companion
Chipset	AMD B300 Chip	set						rights in Windows 10 Pro 64-bit purchase a product key to activate
Front ports*						one (stereo, 3.5mm),		- Windows 7 only
Rear ports*	one specific USB	three U	JSB 2.0 (optional some models).	al extern ethernet	al optical box (RJ-45), two [or I/O box occupies DisplavPort.		 Lenovo Solution Center ThinkVantage System Update Create Recovery Media
I/O box*	one optional port Optional external serial, and two P	(VGA, 3 I/O box S/2, via	Brd DP, HDMI, o , extends four U USB port (occu	r serial c ISB 2.0 (py one s	on some mode (two on front a pecific USB 2.	ls), one headphone nd two on rear), one .0 of M715q Tiny) han theoretical speed		Create Recovery Media Lenovo ThinkVantage Tools CyberlinkPowerDVD Create(DVD±RW Microsoft Office preloaded; purchase a product key to activate
Audio support	High Definition (F	ID) Audi	io, Realtek ALC	233-CG	/ internal spea	ker (1.5 watt)		 Adobe® Reader®
WLAN ¹³		luetooth	4.0 combo ada	apter, 1x	1 `	,.	Environment	ENERGY STAR® 6.1*, EPEAT™ Gold rating* (*Not for non-OS models); ErP Lot 3; GREENGUARD®; RoHS-compliant
	Some: 11ac wire Wi-Fi + B	luetooth less, M. luetooth	14.1 combo ada .2 Card, Qualco 14.1 combo ada	apter, 2x mm Atha apter, 1x	2 eros QCA9377 1	7 (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
Bluetooth™ Ethernet Modem	Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN® None					combo adapter		
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0	, TCG C	Certified					
Security features	Kensington® Mi Padlock loop Smart USB pro	croSave tection, ocks all s	er® cable)	 Hai Bood Indi 	ministrator pas rd disk passwo ot sequence co ot without keyb ividual USB po assis intrusion	ord ontrol ooard and mouse ort disablement		













ThinkCentre M715 Tiny (2nd Gen) Platform Specifications

Processor	AMD Athlon, A6, A10,	A12, or	Ryzen process	sor			Security features	• Security slot (in rear for optional • Administrator password			
	Processor	Cores / Threads		L2 Cache	Memory Support (Up to)	Integrated Graphics		 Kensington® MicroSaver® cable) Padlock loop Smart USB protection, allows keyboard/mouse only, blocks all storage devices Hard disk password Boot sequence control Boot without keyboard and mouse individual USB port disablement 			
	Athlon 200GE	2/4	3.2 GHz	1 MB	DDR4-2933	Radeon Vega 3		Power-on password Chassis intrusion switch			
	Athlon PRO 200GE	2/4	3.2 GHz	1 MB	DDR4-2933	Radeon Vega 3	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	PRO A6-8570E	2/2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5	,	Some: Lenovo Traditional Keyboard (USB connector), black			
	PRO A10-8770E	4/4	2.8 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7	M	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black			
	PRO A6-9500E	2/2	3.0 / 3.4 GHz	1 MB	DDR4-2400	Radeon R5	Mouse	Some: Lenovo Calliope Mouse (USB connector), black			
	PRO A10-9700E	4/4	3.0 / 3.5 GHz	2 MB	DDR4-2400	Radeon R7		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, k Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
	PRO A12-9800E	4/4	3.1 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7	Machanical				
	Ryzen 3 2200GE	4/4	3.2 / 3.6 GHz	2 MB	DDR4-2933	Radeon Vega 8	Mechanical	Tiny (1L), black color; metal case • Toolless chassis open (need optional toolless chassis screw)			
	Ryzen 3 PRO 2200GE	4/4	3.2 / 3.6 GHz	2 MB	DDR4-2933	Radeon Vega 8	_	Optional dust filter			
	Ryzen 5 2400GE	4/8	3.2 / 3.8 GHz			Radeon RX Vega 11		M715 Gen2 Tiny only:			
	Ryzen 5 PRO 2400GE	4/8	3.2 / 3.8 GHz	2 MB	DDR4-2933	Radeon RX Vega 11		7.05" W X 7.20" D X 1.36" H			
Memory	32GB max, DDR4 266 * System automatically							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 / SATA 6.0Gb/s, 2.5", 5400 rpm or 7200 rpm Some: Solid State Drive (SSD) / SATA 6.0Gb/s, 2.5" Some: M.2 SSD / PCle NVMe, PCle 3.0 x 4*, 32Gb/s * 128GB SSD M.2 (2242) PCle NVMe only supports PCle 3.0 x 2, 16Gb/s Some: DVD-ROM, 9.0mm high, via USB external ODD box						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, 9.0						Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models			
Onboard SATA Graphics	One SATA cable (1-dro AMD Radeon™ Graph		,·			-	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	DisplayPort™, one opt displays (supports ma port or DP to DVI/HDN Max resolution: 4096x.	ional por ximum o II dongle 2160 (DI 1200 (VC	t (HDMI, VGA f 2 concurrent es, and Athlon P)@60Hz; 409 GA)@60Hz	, or 3rd HDMI/I / Athlor 6x2160	DP), suppor DVI displays a PRO only s (HDMI)@30	ts 3 independent when using HDMI support 2 displays); DHz;	Preload	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 7 Professional 64 preinstalled through downgrade rights in Windows 10 Pro 64-bit purchase a product key to activate			
Chipset	AMD B300 Chipset	<u> </u>		<u> </u>				 Cyberlink PowerDVD (only for mod 			
	Two USB 3.1 Gen1 (or 3.5mm), one headpho							with DVD / DVD±RW) • Cyberlink Power2GO (only for mod			
Rear ports* (Std.)	One USB 3.1 Gen1 ar							with DVD±RW) ■ LinkedIn - Windows 7 only			
Rear ports* (Opt.)	One optional port (VG. * Depending on many fac ** Not support VGA, 3rd [tors, actua	al data transfer s	speed ma	ay be lower tha	an theoretical speed		 Lenovo Solution Center ThinkVantage System Update Create Recovery Media 			
Audio support	High Definition (HD) A	udio, Re	altek ALC233-	VB2 / i	nternal spea	ker (1.5 watt)]	 Microsoft Office preloaded; purchase a product key to activate 			
WLAN	Some: 11ac wireless, Wi-Fi + Blueto	oth 4.2*	combo adapte	er, 1x1	`	•	Environment	Adobe® Reader®			
	Wi-Fi + Blueto	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 1x1						ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*Not for non-OS models); ErP Lot 3; ; RoHS-compliant			
	Wi-Fi + Blueto	me: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2						MIL-STD-810G military certification (Low Pressure [Altitude], High Temperatur Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Sh			
	Wi-Fi + Blueto	ome: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2				, ,,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Bluetooth Ethernet	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®				rlier only sur						
Manageability Security chip	DASH 1.0/1.1 Discrete TPM 2.0, TCC	G Certifie	ed								













ThinkCentre M715 Tiny Thin Client Platform Specifications

Processor	AMD A6, A10, or	A12 sei	ies APUs				Keyboard		Fullsize USB Keyboard (USB connector), Lenovo logo
	APU	Cores	Frequency	L2	Memory	Integrated	Mouse		USB Optical Wheel Mouse, black, Lenovo logo
	PRO A6-8570E	2	Base/Max 3.0 / 3.4 GHz	Cache 1 MB	Types DDR4-2400	Graphics Radeon R5 Series	Mechanical	Tiny (1L M715 Ti	.), black color; metal case
	PRO A10-8770E	4	2.8 / 3.5 GHz	2 MB	DDR4-2400 DDR4-2400	Radeon R7 Series		7.05" W	X 7.20" D X 1.36" H
	PRO A12-8870E*	4	2.9 / 3.8 GHz	2 MB	DDR4-2400	Radeon R7 Series	-	179mm	W X 182.9mm D X 34.5mm H
						via special bid models	VECA mount		.3 kg), weight may vary by configuration
Memory	4GB max, DDR4					na opoolai bia modolo	Floor Stand		I VESA mount bracket kit, supports VESA 75mm and 100mm I system floor stand for vertical orientation
Disk	Some: 256GB Se		<u>'</u>				Power supply	65 watts	s AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
DISK	*256GB SATA (sup	port Wir	ndows 10 IOT ón	ly) is only	/ available via s	special bid models	Limited warranty ³		1-year or 3-year, depot service / service upgrades available
	Some: 32GB M.2					· ,	Limitod Warranty		1-year or 3-year, limited onsite service / service upgrades available
Optical	Some: 128GB M None	i.2 Solid	State Drive (SS	SD) / PC	ie NVMe interi	race	Preload	Preload	led operating system
Onboard SATA	One SATA cable ((1-drop	o device), one	SATA 6.0	Gb/s connect	or on planar			Windows Embedded Standard 7 V2 (WES 7 V2)
Media reader	None							Some:	Windows 10 IoT Enterprise LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Graphics	AMD Radeon™ C						Environment		Y STAR® 6.1*, EPEAT™ Gold rating* (*not for non-OS models);
						orts 3 independent s when using HDMI	Livioiiiicii		3; GREENGUARD®; RoHS-compliant
	port or DP to DVI	/HDMI c	longles);		, ,	J	Accessories	For com	patible accessories, please go to http://www.lenovoquickpick.com
	Max resolution: 4				160 (HDMI)@:	30Hz;			
DP cable	Optional DP to VC		00 (VGA)@60H: to DVI-D (single		DP to HDMI 1	1.4 dongle			
Chipset	AMD B300 Chips	set	, ,						
Front ports*	Two USB 3.0 (one	e is Alwa	ays On and fast	charge)	, one micropho	one (stereo, 3.5mm),			
	one headphone /	microph	one combo jac	k (stered	, 3.5mm)				
Rear ports*	one specific USB	inree t	some models)	ai extern ethernet	ai opticai box ((R.I-45) two [or I/O box occupies			
	one optional port	(VGA, 3	ord DP, HDMI, o	r serial c	n some mode	ls), one headphone			
I/O box		ny factors	, actual data trans	sfer speed	l may be lower t	han theoretical speed			
	None	ID\	a. Daaltal: ALO	000.00	/ :	lean (d. Fatt)			
Audio support	High Definition (H		*			,			
WLAN ¹³	Some: 11ac wire Wi-Fi + B		4.0 combo ada			na),			
Bluetooth™	Some: Bluetooth	4.0 or 4	I.1 wireless, inte	grated i	n Wi-Fi + BT c	combo adapter			
Ethernet Modem	Gigabit ethernet,	Realtek	RTL8111EPV,	Wake or	LAN®				
Manageability	None DASH 1.0/1.1								
Security chip	Discrete TPM 2.0	TCG C	ertified						
Security features	Security slot (in	*		• Adr	ninistrator pas	sword			
	Kensington® Mi			Har	d disk passwo	ord			
		tootion	allowe keybeer						
	Power-on passy		.3		assis intrusion				
	 Padlock loop Smart USB promouse only, blo 	tection, ocks all s	allows keyboard	d/	vidual USB po	oard and mouse ort disablement			













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

Processor	AMD Athlon, A6, A10,	or Ryze	n processor				Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	APU Athlon PRO 200GE PRO A6-8570E	Cores / Threads 2 / 4 2 / 2	3.2 GHz	lax Cache (Up to) Graphics			Mouse	Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A10-8770E PRO A10-8770E Ryzen 3 PRO 2200GE	4/4	2.8 / 3.5 GHz	2 MB	DDR4-2400		Mechanical	Tiny (1L), black color; metal case Toolless chassis open (need optional toolless chassis screw) Optional dust filter
Memory	8GB max, DDR4 2666 * System automatically							M715 Gen2 Tiny only: 7.05" W X 7.20" D X 1.36" H
Disk Optical Onboard SATA	Some: 32GB M.2 Sol Some: 128GB M.2 So None One SATA cable (1-dro	olid State	Drive (SSD) /	PCIe N	VMe, PCIe 3		VESA mount Floor Stand	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 Optional system floor stand for vertical orientation
Graphics	AMD Radeon™ Grapl		,,				Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (not included for TIO models)
	DisplayPort™, one opt	tional por	t (HDMI, VGA,	or 3rd I	DP), súpport	s 3 independent	Limited warranty	1-year or 3-year, limited onsite service / service upgrades available
Monitor cable	displays (supports ma port or DP to DVI/HDN Max resolution: 4096x 1920x Optional DP to VGA do	MI dongle :2160 (DF :1200 (VC	es, and Athlon / P)@60Hz; 4096 GA)@60Hz	Athlon 8x2160	PRO onlý si (HDMI)@30	upport 2 dĭsplays); Hz;	Preload	Preloaded operating system Some: Windows Embedded Standard 7 V2 (WES 7 V2) Some: Windows 10 IoT Enterprise Some: LeTOS V2 (Lenovo Terminal Operating System, Linux-based)
Chipset	AMD B300 Chipset	origie, Di	ר נט טעו-ט מטוויַ	gie, or i		1.4 dongle	Environment	ENERGY STAR® 6.1*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant
Front ports* (Std.)	Two USB 3.1 Gen1 (or	ne is Alw	ays On and fas	t charg	e), one micr	ophone (stereo,	MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitude], High Temperature,
Rear ports* (Std.)	3.5mm), one headpho One USB 3.1 Gen1 ar	ne / micr	ophone combo USB 2 0 letheri	jack (s net (R.I	tereo, 3.5mr	n) :nlavPort		Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock)
. , ,	one headphoneone One optional port (VG. * Depending on many fac ** Not support VGA, 3rd I	A**, 3rd ctors, actua	DP**, HDMI**, al data transfer sp	or seria	I on some m	nodels) n theoretical speed	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com
Audio support	High Definition (HD) A	udio, Re	altek ALC233-\	/B2 / in	ternal speak	er (1.5 watt)		
WLAN Bluetooth Ethernet	Port High Definition (HD) Audio, Realtek ALC233-VB2 / internal speaker (1.5 watt) Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.2* combo adapter, 2x2 Some: Bluetooth 4.2* wireless, integrated in Wi-Fi + BT combo adapter * Hardware supports BT 4.2, but Win10 RS3 and earlier only supports BT 4.1 Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN®							
Manageability Security chip Security features	DASH 1.0/1.1 Discrete TPM 2.0, TCC Security slot (in rear Kensington® MicroSe Padlock loop Smart USB protectic mouse only, blocks a Power-on password	r for option aver® cate on, allows all storag	onal ole) s keyboard/ e devices	Hard di Boot se Boot wi Individu		trol ard and mouse disablement		













ThinkCentre M715 Tower Platform Specifications

Processor	AMD A6 / A8 / A10 / A1	12 series AF	PU and Ryzen	3 / 5 / 7 series	s processor	Manageability	DASH
	APU / processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Integrated Graphics	Security chip	TPM (Trusted Platform Module) 2.0, TCG Certified * Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS
	Ryzen 3 PRO 1200	4/4	3.1 / 3.4	2MB	None	Security features	Security slot (in rear for optional Power-on password
	Ryzen 3 PRO 1300	4/4	3.5 / 3.7	2MB	None		Kensington® MicroSaver® cable) • Administrator password • Hard disk password
	Ryzen 5 PRO 1500	4/8	3.5 / 3.7	2MB	None		 Padlock loop Smart USB protection, allows keyboard/ Hard disk password Boot sequence control
	Ryzen 7 PRO 1700	8 / 16	3.0 / 3.7	4MB	None		mouse only, blocks all storage devices • Boot sequence control
	PRO A6-8570	2/2	3.5 / 3.8	1MB	Radeon R5 Series		 Optional cable lock to physically lock Individual USB port disablement
	PRO A10-8770	4/4	3.5 / 3.8	2MB	Radeon R7 Series		both keyboard and mouse • Optional chassis intrusion switch
	PRO A12-8870	4/4	3.7 / 4.2	2MB	Radeon R7 Series	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black
	PRO A6-9500	2/2	3.5 / 3.8	1MB	Radeon R5 Series		Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	PRO A8-9600	4/4	3.1 / 3.4	2MB	Radeon R7 Series	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
	PRO A10-9700	4/4	3.5 / 3.8	2MB	Radeon R7 Series		Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	PRO A12-9800	4/4	3.8 / 4.2	2MB	Radeon R7 Series		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Memory	64GB max, UDIMM, DI dual-channel capable * System automatically		·		•	Mechanical r	 Tower (15L), black color, metal case (WxDxH) 5.7" X 11.5" X 14.4"; 145mm X 292.7mm X 366mm Approx. 14.3 lb (6.5 kg), weight may vary by configuration Optional dust filter
Storage	Some: Hard Drive / SA Some: Solid State Driv Some: M.2 Solid State	/e (SSD) / S · Drive (SSI	SATA 6.0Gb/s, 2 0) / PCIe NVMe	2.5" e, PCle 3.0 x 4			Bay 1: Slim external ODD bay Bay 2: 3.5", internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD
Optical	Some: DVD-ROM SAT Some: DVD Burner (D	VD±RW), S	ATA 1.5Gb/s D		mm)		Slot 1: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x16* Slot 2: half-length full-height (length < 189mm, height < 104mm), PCIe 2.0 x1*
Onboard SATA Media reader	Three onboard SATA 6. Optional 7-in-1 media r	eader					Slot 3: half-length full-height (length < 189mm, height < 104mm), 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		,	1 101044	Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (Only available with Pro A6/A10/A12-8xxx APUs)
	Optional DP to VGA, DI	ר נס טעו-ט	(single link), DF	to dual DP, C	OF DP to HUMI 1.4	_	Some: Windows 10 Pro 64-bit
Chipset	AMD B350 Chipset						Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
Front ports*	Two USB 3.1 Gen2, two						Microsoft Office preloaded;
Rear ports*	available via special bid Two USB 3.1 Gen1, two						purchase a product key to activate
rical porto	2nd serial (9-pin), optio	nal parallel	(25-pin), ether	net (RJ-45), o	ne VGA and two		- Only for Window 10
	DisplayPort (not availab	ole on mode	els with AMD R	yzen process	or),		 Lenovo Companion Only for Window 7
	two PS/2 ports (keyboa	rd / mouse)); • • • • • • • • • • • • • • • • • • •		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 Create (DMD) PMM
Audio support	High Definition (HD) Au		•			Environment and	Cyberlink PowerDVD Create (DVD±RW) Children (North America)
WLAN	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, F	Realtek RTL882	1AE (dual ba	, ,	Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant
	Some: 11ac wireless, Wi-Fi + Bluetoo	M.2 Card, C	Qualcomm Athe	ros QCA6174	1A (dual band),	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
	Some: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377 (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 Some: Bluetooth 4.0 or 4.1 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN® None						
Bluetooth™ Ethernet Modem							
	-						













ThinkCentre M720 SFF Platform Specifications

Processor	Intel® Celeron®, Intel I	Pentium®	or 8th Generation	on Intel C	Core™ i3 / i5 / i7 P	rocessor		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
1 10063301		Cores /	Frequency		Memory Support			Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Processor	Threads	Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165, Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	Discourse at la TM	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400		Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCIe x4 Some: Bitland BN8E88*, gigabit ethernet, PCIe x1 (only available via special bid)
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		* Choose either I350-T4 or BN8E88
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	None
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i5-8500	6/6 6/6	3.0G / 4.1G 3.1G / 4.3G	9 MB 9 MB	DDR4-2666 DDR4-2666	UHD 630 UHD 630	Security features	Security slot (in rear for optional Power-on password
	Core i5-8600 Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse
	Core i3-9300	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard/
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630	17 1 1	mouse only, blocks all storage devices
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB		UHD 630		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
Memory	64GB max, UDIMM, I			DIMM so			Mouse	Some: Lenovo Calliope Mouse (USB connector), black
Memory	dual-channel capable		50, IOUI 200-PIII	DIIVIIVI 50	ckets, non-Ecc,			Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
	* System automatical		down for the prod	cessors v	vith lower memor	y controlle	r	Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
Storage	Some: Hard Drive / Some: Solid State Dri Some: M.2 Solid State * M.2 SSD (2242) PC	rive (SSD te Drive () / SATA 6.0Gb/s SSD) / PCIe NVI	i, 2.5" Me, PCle	3.0 x 4*, 32Gb/s	i	Mechanical	 SFF (8.4L), black color; metal case (WxDxH) 3.64" X 11.44" X 13.52"; 92.5mm X 290.5mm X 343.5mm Approx. 13.24 lb (6.0 kg), weight may vary by configuration
Optical	Some: Intel Optane ^{TN} Some: DVD-ROM SA	Memory	(not support Ce	leron / Po	entium Processor	r), M.2		Toolless cover, disk, optical, and extension card removal Optional dust filter Toolless cover, disk, optical, and extension card removal Optional dust filter
·	Some: DVD Burner (DVD±RW	/), SATA 1.5Gb/s		lim (9.0mm)			Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD
Onboard SATA	Three onboard SATA		connectors					Bay 3: 2.5", internal, HDD/SSD (optional bay)
Media reader	Optional 7-in-1 media				5		_	Slot 1: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x16
Graphics	one VGA, two Display							Slot 2: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1 Slot 3: low-profile (length < 147mm, height < 68.9mm), PCle 3.0 x1
	discrete graphics to s			nuent uis	spiays, works alor	ig with		Slot 4: no slot, only bracket for optional port extension
	Max resolution: 4096>	κ2304 (DF	P)@60Hz; 2048x				F. O	M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	Some: NVIDIA Gefor			2GB, PCI	e 2.0 x16 adapte	r,	Floor Stand	Optional system floor stand for vertical orientation
	two DisplayPo Max resolution	าเ, งอ wat ว: 3840x2	ts; 160 (DisplayPort)@60Hz	:		Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor cable	Optional DP to VGA d	longle, DF	P to DVI-D dongl	e, DP to	dual DP dongle (for Collage		Some: 210 watts, autosensing, 85% PSU Some: 260 watts, autosensing, 92% PSU (only available via special bid)
	Display with intel integ							
Chipset	Intel B360 Chipset						Limited warranty	³ Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available
Front ports* (Std.)	2x USB 3.1 Gen2, 2x 1x microphone (3.5m)						Preload	Preloaded operating system
Front ports* (Ont	Optional: 1x media re		aupitorie / micro	priorie de	inibo jauk (J.Jilli	'/		Some: Windows® 10 Pro 64-bit
Rear ports* (Std.)	4x USB 2.0, 1x serial	(9-pin), 1	x ethernet (RJ-4	5), 1x VG	A, 2x DisplayPor	t,		Some: Windows 10 Home 64-bit Preloaded applications (only some listed)
	1x line-out (3.5mm)							Lenovo Vantage
Hear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCI2 x1**, 2x U	SB 3.1 Ty	ype-C Gen2 via F	Cle x4**		Microsoft Office preloaded:
	(special bid only), 1x 2 pin), 2x PS/2 ports (ke	∠⊓u se⊓al evboard/n	າ (ອ-piri), 4x seria nouse), addition:	u (9-pin) al R.I-45	via POIE XI, IX p and video norts a	arallel (25- Ivailable on		purchase a product key to activate
	optional graphics or e	thernet ca	ard	21 1 10 40	and video porto d	wanabio oi	•	Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2CO (only for models with DVD / DVD±RW)
	* Depending on many fac	ctors, actua	al data transfer spe			ical speed		Cyberlink Power2GO (only for models with DVD±RW) LinkedIn
	** Choose either 2x USB						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO,
Audio support	High Definition (HD) A					tt)		TUV low noise verified (coming soon, on some models), RoHS-compliant
WLAN	Some: 11ac wireless Wi-Fi + Blueto		d, Realtek RTL8 ombo adapter, 1		dual band),		Accessories	For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M720 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel I	Pentium®,	or 8th Generation	on Intel	Core™ i3 / i5 / i7	Processor	Manageability	None			
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security chip	Discrete TPM 2.0, TCG Certified S • Security slot (in rear for optional • Boot sequence control			
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	Security leatures	 Security slot (in real Kensington® Micros 	ar for optional	Boot sequence Boot without keep	control
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400 DDR4-2400	UHD 610		 Kensington® MicroSaver® cable) Chassis intrusion switch Boot without keyboard ar Individual USB port disal 		port disablement	
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		 Power-on password 	d	 Smart USB prof 	ection, allows keyboard/
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630		Administrator passy	word	mouse only, blo	cks all storage devices
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630		Hard disk password			
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Callic Some: Lenovo Tradit			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Callic	one Wireless Kevl	board (2.4GHz via l	JSB receiver), black
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Callic	ope Mouse (USB	connector), black	JOB 10001V01), black
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630		Some: Lenovo Finge	erprint Mouse (US	SB connector), Wind	lows Hello support, black
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	1	Some: Lenovo Callic	<u>'</u>	ise (2.4GHz via US)	B receiver), black
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	Mechanical	Tiny (1L), black color	; metal case		
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630		Toolless chassis opToolless HDD, SSD	pen (need optiona	al toolless chassis s	crew)
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		 Optional dust filter 	, memory remova	dI .	
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		one 2.5" bay for HDD	SSD, one PCIe	3.0 x8 slot (low-prof	ile), two M.2 slots (one
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630		for WLAN, one for M.	.2 SSD), 2.5" HDI	D/SSD and PCle ca	rd are mutually exclusive
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630			Dimensio	ns (WxDxH)	Weight (Approx.)
Memory	32GB max, DDR4-26	66* two 2	260-nin SO-DIMI	/ socke	ts non-FCC		1	Tiny only		.20" X 1.36"	2.91 lb (1.32 kg),
WEITIOT y	dual-channel capable		.00-piii 30-Diivii	VI SOUNC	is, 11011-LOO,			l'iniy onny		.9mm X 34.5mm	vary by config
	* System automatical		down for the prod	cessors	with lower memo	ry controller	r	With VESA mount &	7.42" X 7	.30" X 2.48"	3.66 lb (1.66 kg),
Storage	Some: Hard Drive / S	SATA 6.00	ab/s, 2.5", 5400 r	pm or 7	200 rpm		1	ODD box		5.38mm X 63mm	vary by config
Ü	Some: Solid State Dr	ive (SSD) / SATA 6.0Gb/s	, 2.5"	•			Optional VESA moun	at bracket kit, cupi	norte VESA 75mm /	and 100mm
	Some: M.2 SSD / PC				210 2 0 v 0 160h	10	VESA mount Floor Stand	Optional system floor	r stand for vertica	l orientation	and roomin
	* 128GB SSD M.2 (22 Some: Intel Optane TM	1 Memory	(not support Ce	ports Pt Ieron / F	Pentium Processo	or) M 2					
Optical	Some: DVD-ROM, sl	im (9.0mr	n), via ÚSB exte	rnal OD	D box	*	Power supply	Some: 65 watts AC/I Some: 90 watts AC/I	DC adapter, autos	sensing, 88% PSU	
	Some: DVD Burner ($DVD \pm RW$), slim (9.0mm),	via USE	B external ODD b	ox		Some: 135 watts AC			
Onboard SATA	One onboard SATA 6						Limited warranty	Some: 1-year or 3-y	• •		
Graphics	Intel HD Graphics 61						Limited Warranty	Some: 1-year or 3-y			
	DisplayPort™, one HE or USB 3.1 Type-C Ge						Preload	Preloaded operating	a system		
	Max resolution: 4096					t diopidyo,		Some: Windows® 10			
	4096>	(2160 (on	board HDMI)@2	4Hz; 20	48x1536 (VGA)@	҈950Hz		Some: Windows 10	Home 64-bit	!! - 4!\	
Monitor cable	Optional DP to VGA d					(for Collage		Preloaded applicationLenovo Vantage	ons (only some	listea)	
	Display with intel integ	grated gra	ipnics), or DP to	HDMI 1	.4 dongle			 Microsoft Office pre 	eloaded:		
Chipset	Intel B360 Chipset							purchase a produc	t key to activate		
Front ports* (Std.)	one USB 3.1 Gen1 (A							 Cyberlink PowerDV 			RW)
Poor porte* (Std.)	one microphone (3.5r 2x USB 3.1 Gen2, 2x	nm), one	headphone / mid	crophon	e combo jack (3.5	omm)		Cyberlink Power2GLinkedIn	O (only for mode	els with DVD±RW)	
Rear ports* (Opt.)) Two optional ports (m	utually ex	clusive with PCI	e card):	Port 1 for VGA /	2nd DP /	Carrier and		EDEATM Cold	ations (North Associa	-\ F-D1 -+ 0 TOO
(2nd HDMI / serial / US	SB 3.1 Ty _l	be-C Gen 1 with	DP fund	ction); Port 2 for s	serial;	Environment	ENERGY STAR® 7.0. TUV ultra low noise v	, EPEAL TO GOID 18	oon on some mode	a), EIP LOUS, TOO,
	Optional ports via PC	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	-pin) via	MIL-SPEC test				de], High Temperature,
	PCIe x1 * Depending on many fac	etore actua	al data transfer sne	ad may h	e lower than theore	tical speed	IVIIL-31 LO lest	Low Temperature. Tel	mperature Shock	. Humidity. Sand an	d Dust, Vibration, Shock,
Audio support	Realtek ALC233VB2		<u> </u>			nicai speca	+	Fungus, Solar Radiat	tion)		, , ,
WLAN	Some: 11ac wireless		· •	`			Accessories	For compatible acces	ssories, please go	to http://smartfine	d.lenovo.com
VVLAIN	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 1	0210⊑ (x1	duai band),						
	Some: 11ac wireless	, M.2 Car	d, Realtek RTL8	822BE ((dual band),						
			ombo adapter, 2		40.0405						
	Some: 11ac wireless		d, Intel Dual Bar ombo adapter, 1		ess-AC 3165,						
	Some: 11ac wireless				ess-AC 8265.						
	Wi-Fi + Blueto	oth 4.2 c	ombo adapter, 2	x2							
Bluetooth	Some: Bluetooth 4.2	wireless,	integrated in Wi	-Fi + BT	combo adapter	I ANI®					
Ethernet Ethernet (Opt.)	Gigabit ethernet, Intel Some: Intel Ethernet										
Euromot (Opt.)	Como. Intol Ethollict	SOLVOL AL	ιαριοι 1000-14, <u>ξ</u>	igabit 6		,, 1 OIO AT					













ThinkCentre M720 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pantium®	or 8th Generation	on Intel (Core™ i3 / i5 / i7 F	Processor	WLAN ¹³	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),
1 10003301		Cores /	Frequency		Memory Support		VVLAIN	Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Processor		Base/Max(GHz)	Cache	(Up to)	Graphics		Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	D	Wi-Fi + Bluetooth 4.2 combo adapter, 2x2
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Bluetooth™	Some: Bluetooth 4.2 wireless, integrated in Wi-Fi + BT combo adapter
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-V (Jacksonville), Wake on LAN®
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4*, gigabit ethernet, 4x RJ-45, PCle x Some: Bitland BN8E88*, gigabit ethernet, 1x RJ-45, PCle x1 (special bid only)
						UHD 630		* Choose either I350-T4 or BN8E88
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability	None
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	• Security slot (in rear for optional • Power-on password
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Kensington® MicroSaver® cable) • Administrator password
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		 Padlock loop Optional cable lock to physically lock Boot sequence control
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot sequence control • Boot without keyboard and mouse
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Individual USB port disablement
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
Memory	64GB max, UDIMM, I		66*, four 288-pin	DIMM s	ockets, non-ECC	,		Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)
	dual-channel capable		down for the pro-		with lawar mama	w aantralla.	Mouse	Some: Lenovo Calliope Mouse (USB connector), black
0.	* System automatical					ry controller		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
Storage	Some: Hard Drive / S Some: Solid State Drive	SAIA 6.00	3b/s, 2.5" or 3.5"	, 5400 rp	om or 7200 rpm			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)
	Some: M.2 Solid Sta				e 3.0 x 4*. 32Gb/s	S	Mechanical	• Tower (15L), black color, metal case
	* 128GB SSD M.2 (22	242) PCIè	NVMe only sup	ports PC	Cle 3.0 x 2. 16Gb	/s	Mechanical	• (WxDxH) 5.91" X 10.65" X 14.17"; 150mm X 270.5mm X 360mm
Ontinal	Some: Intel Optane	Memory	(not support Ce	leron / F	entium Processo	or), M.2		Approx. 15.21 lb (6.9 kg), weight may vary by configuration
Optical	Some: DVD-ROM Some: DVD Burner (lim (9 0mm)			Optional dust filter
Onboard SATA	Three onboard SATA			Diivo, o	(0.011111)			Bay 1: Slim external ODD bay Bay 2: 3.5", 1" high, internal, HDD/SSD
Media reader	Optional 7-in-1 media	reader						Bay 3: 3.5", 1" high, internal, HDD/SSD (optional bay)
Graphics	Intel UHD Graphics	610/630 i	n processor, use	s main r	nemory, DirectX®	12,	1	Slot 1: half-length full-height (length < 189mm, height < 104mm), PCIe 3.0 x16
	one VGA, two Display			ndent di	splays, works alo	ng with		Slot 2: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1
	discrete graphics to s Max resolution: 4096)			1536 (\/	GA)@50Hz			Slot 3: half-length full-height (length < 189mm, height < 104mm), PCle 3.0 x1 Slot 4: no slot, only bracket for optional port extension
	Some: NVIDIA Gefor					er.		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
	two DisplayPo	rt, 35 wat	ts;	•	·	•	Power supply	Some: 180 watts, autosensing, 85% PSU
Monitor Cable	Max resolution Optional DP to VGA		160 (DisplayPort			for Callaga	1	Some: 210 watts, autosensing, 85% PSU
Worldon Cabic	Display with intel integ					(ioi Collage		Some: 260 watts, autosensing, 92% PSU (only available via special bid)
Chipset	Intel B360 Chipset	9 9			· · · · · · · · · · · · · · · · · · ·		Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available
Front ports* (Std.)	2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x USB 3	3.1 Type-	C Gen1 (15W ch	arging).	Preload	Some: 1-year or 3-year, limited onsite service / service upgrades available Preloaded operating system
, , ,	1x microphone (3.5m	m), 1x he					Fieldau	Some: Windows® 10 Pro 64-bit
Front ports* (Opt.	Optional: 1x media re	ader						Some: Windows 10 Home 64-bit
Hear ports (Std.)	4x USB 2.0, 1x serial 1x line-out (3.5mm)	(9-pin), 1	x ethernet (HJ-4	5), 1x v(3A, 2x DisplayPo	rt,		Preloaded applications (only some listed)
Rear ports* (Opt.)	Optional: 2x USB 3.1	Gen1 via	PCIe x1**. 2x U	SB 3.1 T	vne-C Gen2 via F	PCIe x4**		Lenovo Vantage
	(special bid only), 1x	2nd seria	l (9-pin), 4x seria	al (9-pin)	via PCIe x1,			Microsoft Office preloaded; purchase a product key to activate
	1x parallel (25-pin), 2				dditional RJ-45 ar	nd video		Cyberlink PowerDVD (only for models with DVD / DVD±RW)
	ports available on opt * Depending on many fac-				e lower than theore	tical enood		Cyberlink Power2GO (only for models with DVD±RW)
	** Choose either 2x USB					iicai speed		• LinkedIn
Audio support	High Definition (HD)					ntt)	Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant
							Accessories	For compatible accessories, please go to http://smartfind.lenovo.com













ThinkCentre M725 SFF Platform Specifications

D	AMD 40 / 40 / 445 /	A40 :-	2 6 / 5 / 5	7 1			Ed	Observation and Develop DTI 0444EDV VV			
Processor	AMD A6 / A8 / A10 / A	A12 and F	·		i ı		Ethernet (Opt.)	Gigabit ethernet, Realtek RTL8111EPV, Wake on LAN® Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)			
	Processor	Cores / Threads	Frequency (Base/Max)	L2 Cache	Memory Support (Up to)	Integrated Graphics	Manageability Security chip	DASH 10/1.1 Discrete TPM 2.0, TCG Certified			
	PRO A6-9500	2/2	3.5 / 3.8	1MB	DDR4-2400	Radeon R5	Security features	Security slot (in rear for optional • Power-on password			
	PRO A8-9600	4/4	3.1 / 3.4		DDR4-2400	Radeon R7	,	Kensington® MicroSaver® cable) • Administrator password			
	PRO A10-9700	4/4	3.5 / 3.8	+	DDR4-2400	Radeon R7		Padlock loop			
	PRO A12-9800	4/4	3.8 / 4.2		DDR4-2400	Radeon R7		Smart USB protection, allows keyboard/ Boot sequence control Boot without keyboard and mouse			
	Ryzen 3 2300X	4/4	3.5 / 4.0		DDR4-2933	None		 mouse only, blocks all storage devices Optional cable lock to physically lock Individual USB port disablement 			
	Ryzen 5 2500X	4/8	3.6 / 4.0	† 	DDR4-2933	None		both keyboard and mouse • Optional chassis intrusion switch			
	Ryzen 3 PRO 2200G	4/4	3.5 / 3.6		DDR4-2933	Radeon Vega 8	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Ryzen 5 PRO 2400G	4/8	3.6 / 3.8	-		Radeon RX Vega 11		Some: Lenovo Traditional Keyboard (USB connector), black			
	Ryzen 5 PRO 2600	6/12	3.4 / 3.9	-	DDR4-2933	None		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
-	Ryzen 7 PRO 2700	8/16	3.2 / 4.1		DDR4-2933	None	Mouse	Some: Lenovo Calliope Mouse (USB connector), black			
Memory	64GB max, UDIMM, I dual-channel capable * Systemboard suppo clocks down for the lo	e orts up to	DDR4-2666, i	memory	r frequency n	nay automatically		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)			
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 SSD / PC * 128GB SSD M.2 (2: supports PCle 3.0 x 2:	SATA 6.00 rive (SSD Cle NVMe 242) PCIe 2, 16Gb/s	Ab/s, 2.5" or 3) / SATA 6.0G , PCIe 3.0 x 4 e NVMe and A	8.5", 540 ab/s, 2.5 1*, 32Gb AMD A6	00 rpm or 720 0/s / A8 / A10 /	00 rpm	Mechanical	 SFF (8.4L), black color; metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.2 lb (6.0 kg), weight may vary by configuration Toolless cover, disk, optical removal Optional dust filter Bay 1: Slim external ODD bay 			
Optical	Some: DVD-ROM S. Some: DVD Burner	(DVD±RW	/), SATA 1.5G	ib)s Driv	ré, slim (9.0n	nm)		Bay 2: 3.5", nternal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (bay only comes with 2.5" 2nd disk)			
Onboard SATA	Three onboard SATA 6.0Gb/s connectors, RAID 0/1 support (RAID preset only available via special bid model) Optional 7-in-1 media reader					ID preset only		Slot 1: low-profile (length < 150mm, height < 68mm), PCIe 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCIe 2.0 x1			
Media reader											
Graphics	AMD Radeon™ Graphics in processor (only for some processors), uses main memory, DirectX® 12, one VGA, two DisplayPort™ (Onboard VGA and DP ports are only available on the models with integrated graphics), supports 3 independent displays, works along with AMD discrete graphics to support more displays; Max resolution: 4096x2160 (DP)@60Hz; 1920x1200 (VGA)@60Hz Some: NVIDIA Geforce® GT 730, DirectX 12, 2GB GDDR5, PCIe 2.0 x16 (x8 elect adapter, two DisplayPort, 35 watts;						Floor Stand	Slot 4: low-profile (length < 150mm, height < 68mm), PCI 3.0 M.2 card slots: two (one for WLAN, one for SSD) Optional system floor stand for vertical orientation			
							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)			
Manitar aphla	Max resolution	n: 3840x2	160 (DisplayF	Port)@6	0Hz		Limited warranty	1-year or 3-year, limited onsite service / service upgrades available			
Monitor cable	Optional DP to VGA dongle, DP to DVI-D donglé, DP to dual DP dongle, or DP to HDMI 1.4 dongle					dongle,	Preload	Preloaded operating system Some: Windows 10 Pro 64-bit			
Chipset	AMD B450 Chipset							Some: Windows 10 Home 64-bit Preloaded applications (only some listed) Lenovo Vantage Microsoft Office preloaded;			
Front ports* (Std.) 2x USB 3.1 Gen2, 2x	USB 3.1	Gen1, 1x mic	rophone	e (3.5mm), 1	x headphone					
Fue and an ender* (One)	(3.5mm)	- d O I	ICD 0.4 Time	0.0	o de DOIs se	لا باعده اعتمال اعتماد عدد ا					
	ý 2x USB 3.1 Gen1, 2x 2x DisplayPort**, 2x F	Optional: 1x media reader, 2x USB 3.1 Type-C Gen2 via PCIe card (special bid on 2x USB 3.1 Gen1, 2x USB 2.0, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA**, 2x DisplayPort**, 2x PS/2 ports (keyboard / mouse); 1x line-in (3.5mm), 1x line-ou		-45), 1x VGA**,		purchase a product key to activate Cyberlink PowerDVD (only for models with DVD / DVD±RW) Cyberlink Power2GO (only for models with DVD±RW)					
Rear ports* (Ont.	(3.5mm), 1x micropho Optional: 2x USB 2.0			1x para	llel (25-pin).	additional RJ-45		• LinkedIn			
, p (9p.	and video ports availa	Optional: 2x USB 2.0, 1x 2nd serial (9-pin), 1x parallel (25-pin), additional RJ-45 and video ports available on optional graphics or ethernet card Depending on many factors, actual data transfer speed may be lower than theoretical speed only available on the models with integrated graphics			Environment	ENERGY STAR® 7.0*, EPEAT™ Silver rating* (*not for non-OS models); ErP Lot 3; RoHS-compliant					
							Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
Audio support		High Definition (HD) Audio, Realtek ALC662 / optional internal speaker (1 watt)									
WLAN	Some: 11ac wireless Wi-Fi + Bluete Some: 11ac wireless Wi-Fi + Bluete Some: 11ac wireless Wi-Fi + Bluete Some: 11ac wireless	ooth 4.2 c s, M.2 Car ooth 4.2* s, M.2 Car ooth 4.2* s, M.2 Car	combo adapterd, Qualcomm combo adapterd, Realtek Ricombo adapter combo adapterd, Qualcomm	r, 1x1 n Athero er, 1x1 ΓL8822Ε er, 2x2 n Athero	s QCA9377 <i>I</i> 3E (dual ban	A (dual band), d),					
Bluetooth™	Wi-Fi + Bluetoome: Bluetooth 4.2 * Hardware supports	ooth 4.2* * wireless	combo adapto s, integrated in	er, 2x2 n Wi-Fi -	+ BT combo	adapter					



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-F			a vPro-support Wi-Fi	
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support (Up to)	Integrated Graphics	Security chip	adapter to enable vP Discrete TPM 2.0, TO	ro function throug 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® Micros Chassis intrusion s 		Boot without keIndividual USB	yboard and mouse
	Core i5-8365U	4/8	1.6G / 4.1G	6 MB	DDR4-2400	UHD 620		Power-on passwore			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 Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
Memory	8GB or 16GB / DDR4 * System automatical						Keyboard				
Storage	Support up to two M. Some: M.2 2280 SS Some: M.2 2242 SS Some: Intel Optane ^T PCIe NVMe 3	D / PCle D / PCle M Memory	NVMe, PCIe 3.0	x 2 State St	orage, M.2 2280,	,	Mouse				
RAID Optical	* M.2 SSD / Optane with RAID 0/1 support (RA None	SSD in P	Cle 3.0 x 2 M.2 slot	can only		•	Mechanical	Nano (0.35L), black of Three M.2 slots: two for WLAN		PCIe 3.0 x4 and o	ne PCle 3.0 x2) and one
Graphics	Intel HD Graphics 610/620 in processor, uses main memory, DirectX® 12, one DisplayPort™, one USB 3.1 Type-C Gen2 with display function, up to 2 independent								Dimension	ns (WxDxH)	Weight (Approx.)
	displays;	,		' '	, ·	ndependent	Mounting	M90n-1 Nano (with fan, 0.35L)	7.05" X 3.	46" X 0.87" 8mm X 22mm	1.11 lb (0.505 kg), vary by config
Monitor cable	Max resolution: 4096: Optional DP to VGA of HDMI dongle, Type-C	dongle, D	P to HDMI dongle			, Type-C to		Some: VESA mount bracket kit, supports VESA 75mm Some: VESA mount bracket kit with adaper holder, supports VESA 75mm Some: DIN rail mount bracket kit None			
Chipset	Intel SoC (System o						Floor Stand				
Front ports (Std.)	* 2x USB 3.1 Gen2, 1x jack (3.5mm)	USB 3.1	Type-C Gen 2, o	ne head	dphone / microph	one combo	Power supply	65 watts AC/DC adapter, autosensing, 88% PSU (Not for TIO models)			
Rear ports (Std.)	* 2x USB 3.1 Gen2, 1x power-in [20V and >4	5W]), 1x	eťhernet (RJ-45)	, 1x Dis	pláyPort Ó		Limited warranty				
A eli e. e e e e e e e	* Depending on many fa		· · · · · · · · · · · · · · · · · · ·	eeu may	be lower than theor	elicai speed	Preload	Preloaded operating system			
Audio support WLAN	Realtek ALC233VB / Some: 11ac wireless	, M.2 Car	d, Realtek RTL8		(dual band),		_	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	Some: 11ac wireless	s, M.2 Car	combo adapter, 1 rd, Realtek RTL8 combo adapter, 2	822CE	(dual band),		Environment	ENERGY STAR® 7.1 TUV ultra low noise v			ca), ErP Lot 3, TCO 8.0, EEE, REACH
	Some: 11ac wireless	s, M.2 Ca	d, Intel Wireless ombo adapter, 1	-AC 946	2 (dual band),		MIL-SPEC test				ure, Low Temperature, Shock, Solar Radiation)
	Some: 11ac wireless Wi-Fi + Bluet	s, M.2 Car ooth 5.0 c	d, Intel Wireless ombo adapter, 2	-AC 956 x2	, , ,		Accessories	For compatible acces			
	Some: 11ac wireless Wi-Fi + Bluet	ooth 5.0 d	combo adapter, Ir	ntel vPro	technology sup	port, 2x2					
Bluetooth Ethernet	Some: Bluetooth 5.0 Gigabit ethernet, Inte	wireless,	integrated in Wi-	-Fi + BT	combo adapter						
Note: The enecified	ations above may not be	ovoiloblo.	in all regions								Lenovo July 2019







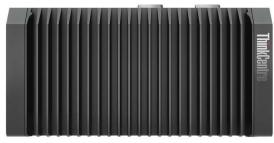














ThinkCentre M90n-1 Nano IoT Platform Specifications

Processor	Intel® Celeron® or 8th	n Generati	on Intel Core™ i3	3 Proces	sor		Manageability	None			
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	Security chip	Discrete TPM 2.0, TCG Certified			
	Celeron 4205U	Threads 2 / 2	Base/Max(GHz)	2 MB	(Up to) DDR4-2133	Graphics UHD 610	Security features	S • Security slot (in rear for optional Kensington® MicroSaver® cable) • Boot sequence control • Boot without keyboard and mouse			
	Core i3-8145U	2/4	2.1G / 3.9G	4 MB	DDR4-2133 DDR4-2400	UHD 620		Chassis intrusion switch Individual USB port disablement			
N4						0110 020	<u> </u>	Power-on password			
Memory	4GB / DDR4-2666* / * System automatica					ory controlle		Administrator password Hard disk password			
Storage	* M.2 SSD / Optane with	BD / PCIe I BD / PCIe I M Memory 3.0 x 4 (no h SSD in Po	NVMe, PCIe 3.0 y H10 with Solid Sot support Celero Cle 3.0 x 2 M.2 slot	x 2 State St n) can only	run at PCle 3.0 x2		Keyboard Mouse	Some: Lenovo Calliope Keyboard (USB connector), black Some: Lenovo Traditional Keyboard (USB connector), black Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black			
RAID Optical	RAID 0/1 support (RANOne	AID prese	t only available v	ia speci	al bid model)		Mechanical	Nano (fanless 0.55L), black color; metal case			
Graphics	Intel HD Graphics 6							Four \dot{M} .2 slots: two for \dot{M} .2 SSD (one PCIe 3.0 x4 and one PCIe 3.0 x2), one for \dot{M} LAN, and one for \dot{M}			
	DisplayPort™, one Usinglays;	SB 3.1 Typ	be-C Gen2 with o	display f	unction, up to 2 ii	ndependent		Dimensions (WxDxH) Weight (Approx.)			
Monitor cable	Max resolution: 4096 Optional DP to VGA	dongle, DI	P to HDMI dongle			, Type-C to		M90n-1 Nano IoT (fanless, 0.55L) 7.05" X 3.46" X 1.36" 179mm X 88mm X 34.5mm 1.58 lb (0.72 kg), vary by config			
Chipset	HDMI dongle, Type-C						Mounting	Some: VESA mount bracket kit, supports VESA 75mm			
	2x USB 3.1 Gen2, 1			no hoos	Inhana / miaranh	ana aamba	-	Some: VESA mount bracket kit with adaper holder, supports VESA 75mm Some: DIN rail mount bracket kit			
. , ,	iack (3.5mm) 2x seri	ial					Floor Stand	None			
Rear ports (Std.)*	With Celeron: 1x US	B 2.0, 1x	USB 3.1 Type-C	Gen 2 (with display funct	tion, support	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU Some: 65 watts AC/DC adapter (wide temperature), autosensing, 88% PSU (only for Machine Type 11AS)			
	With Core i3: 1x US	B 3.1 Ger	> 45W]), 1x ether n2, 1x USB 3.1 Ty n [20V, > 45W]),	/pe-È G	en 2 (with displa	v function,					
	* Depending on many f	actors, actu	ıal data transfer spe	ed may	be lower than theor	etical speed	Limited warranty				
Audio support	Realtek ALC233VB /		. , ,				Preload	Some: 3-year, limited onsite service / service upgrades available			
WLAN	Some: 11ac wireless	tooth 5.0 c s, M.2 Cai	combo adapter, 1	x1 822CE	, ,,		Preioad	Preloaded operating system Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit Some: Windows 10 IoT Enterprise (only available via special bid model)			
	Some: 11ac wireles: Wi-Fi + Bluet		rd, Intel Wireless combo adapter, 1		2 (dual band),		Environment	ENERGY STAR® 7.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO 8.0 TUV ultra low noise verified (on some models), RoHS, WEEE, REACH			
	Some: 11ac wireless Wi-Fi + Bluet	s, M.2 Cai tooth 5.0 c	rd, Intel Wireless combo adapter, 2	-AC 956 x2	,		MIL-SPEC test	, , , ,			
	Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band), Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2							For compatible accessories, please go to http://smartfind.lenovo.com			
Bluetooth Ethernet	Some: Bluetooth 5.0 With Celeron: Gigab With Core i3: Two g) wireless, oit etherne	integrated in Wi- t, Realtek RTL81	Fi + BT 11K, 1x	combo adapter RJ-45, Wake on	LAN®	Accessories	Tot companie accessorios, prodes go to mapinomariamanone colonia			
Note: The exection	tions above may not be		i				<u> </u>	Lenovo July 2			













ThinkCentre M910 SFF Platform Specifications

Processor	Intel® Celeron®. Int	tel Pentiur	m®, or 6/7th Gen	eration Ir	ntel Core™ i3 / i5 /	i7 Processor	Security features	Security slot (in rear for optional Power-on password			
	Processor	Cores /	Frequency 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	ble	'		,	•	Mechanical	 SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 11.92 lb (5.4 kg), weight may vary by configuration 			
Storage	Some: Hard Drive Some: Solid State Some: M.2 Solid S	e Drive (St State Driv	SD) / SATA 6.0G e (SSD) / PCIe N	b/s, 2.5" VVMe, P	Cle 3.0 x 4, 32Gb	/s		 Toolless cover, disk, optical, graphic card removal Optional dust filter Bay 1: Slim external ODD bay 			
Optical	Some: Intel Optan Some: DVD-ROM Some: DVD Burne	l SATA 1.5 er (DVD±l	5Gb/s Drive, slim RW). SATA 1.5G	(9.0mm b/s Drive) . slim (9.0mm)			Bay 2: 3.5", 1" high, internal, HDD/SSD Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16* Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1* Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal)*			
Onboard SATA	Four onboard SATA available via specia	A 6`.0Gb/s al bid mod	connectors, RAI del)	ID 0/1 su	pport (RAID pres	et only					
Media reader	Optional 7-in-1 me						-	Slot 4: no slot, only bracket for optional port extension* M.2 card slots: Two (one for WLAN, one for SSD/Optane)			
Graphics	one VGA, two Disp discrete graphics to	olayPort™, o support	, supports 3 inde more displays;	pendent	displays, works a			*Optional 2 front USB3.1 Type-C ports module occupies PCle x16 (x4 signal) slo optional rear 2x USB2.0 / parallel / 2nd serial / cable lock / Wi-Fi antenna occupie 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			z, 200, i	Ole 2.0 X0 adapt	CI,	Power supply	Some: 180 watts, autosensing, 85% PSU			
Monitor cable		tion: 3840	x2160 (DisplayP	ort)@60 k), DP to	Hz; dual DP, or DP to	HDMI 1.4	Tower suppry	Some: 210 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	Intel Q270 Chipse	et									
Front ports*	Four USB 3.1 Gen				en 2 (only availabl	e via special	Some: 1-year or 3-year, limited onsite service / service upgrades available				
Rear audio ports	bid), microphone (3 Four USB 3.1 Gen optional parallel (2 PS/2 ports (keyboa additional DisplayF Line-in (3.5mm), lir	1, optiona 5-pin), eth ard/mouse Port on op	al two USB 2.0, s nernet (RJ-45), o e); tional graphics o	serial (9-p one VGA, on some i	two DisplayPort, models	serial (9-pin), optional two	,	Preloaded operating system Some: Windows® 7 Professional 32/64 preinstalled through downgrade rights in Windows 10 Pro 64-bit (not available with 7th Gen Intel processes) Preloaded applications (only some listed) Microsoft Office preloaded; purchase a product key to activate - Only for Window 10			
IEEE 1394*	None * Depending on many					retical speed		some: Windows 10 Pro 64-bit Some: Windows 10 Home 64-bit Lenovo Companion - Only for Window 7 Lenovo Companion - Only for Window 7 Lenovo Solution Center			
Audio support						· ·	-	 Lenovo ThinkVantage Tools 			
WLAN ¹³	Some: 11ac wirele Wi-Fi + Blu Some: 11ac wirele	igh Definition (HD) Audio, Realtek ALC662 / optional internal speaker (1.5 watt) ome: 11ac wireless, M.2 Card, Qualcomm Atheros QCA9377A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 1x1 ome: 11ac wireless, M.2 Card, Qualcomm Atheros QCA6174A (dual band), Wi-Fi + Bluetooth 4.1 combo adapter, 2x2						 Create Recovery Media Adobe® Reader® Cyberlink PowerDVD Create (DVD±RW) 			
	Some: 11ac wirele Wi-Fi + Blu	ess, M.2 (uetooth 4.	Card, Intel Dual E 1 combo adapte	Band Wir r, 1x1				ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,			
	Some: 11ac wirele Wi-Fi + Blu				eless-AC 8265,			TUV low noise verified (on some models) For compatible accessories, please go to http://www.lenovoquickpick.com			
	Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.1 combo adapter, Intel vPro technology support, 2x2				Pro technology su	pport, 2x2	, 1000001100	. o. ospanore accessorios, piedes go to intern manore quiet per con-			
Bluetooth™ Ethernet Modem	Some: Bluetooth 4 Gigabit ethernet, Ir None										
Manageability Security chip	Intel Active Manag Intel vPro technolo adapter to enable v TPM (Trusted Platf * Downgrade to TP	ogy on sor vPro funct form Mod	ne models (requition through wire ule) 2.0, TCG Ce	ire choos less con ertified	sing a vPro-suppo nection)	rt Wi-Fi					













ThinkCentre M910 Tiny Platform Specifications

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

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













ThinkCentre M910 Tower Platform Specifications

			® 0/711 O				le	0: 1:: "										
Processor	Cores / Fraguenay Mamory Support Integrated						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 Toolloop gover disk entirel graphic gord removal.										
Media reader	(RAID preset only a Optional 7-in-1 me			odel)				 Toolless cover, disk, optical, graphic card removal Optional carry handle, dust filter 										
Graphics	Intel HD Graphics			secor He	es main memory	DirectY® 12		Bay 1: Slim external ODD bay										
Graphics	one VGA, two Disp	olayPort™.	supports 3 inde	pendent	displavs, works a	long with		Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD										
	discrete graphics to	discrete graphics to support more displays; Max resolution: 4096x2304 (DP)@60Hz; 2048x1536 (VGA)@50Hz Some: NVIDIA Geforce® GT 730, DirectX 12, 2GB, PCle 2.0 x8 adapter, two DisplayPort, 35 watts; Max resolution: 3840x2160 (DisplayPort)@60Hz; Some: AMD Radeon™ R7 350, DirectX 11, 2GB, PCle 3.0 x8 adapter, one VGA, one HDMI, 75 watts, occupies two slots;						Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)										
								Bay 5: 2.5", internal, HDD/SSD (optional bay)										
								Notes: M910 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and 1 eSATA device (front access HDD)										
	Max resolu							Slot 1: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x16*										
								Slot 2: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x1*										
						085Hz		Slot 3: full-length full-height (length < 268mm, height < 112mm), PCle 3.0 x16 (x4 signal)*										
	Some: NVIDIA Ge	Max resolution: 4096x2160 (HDMI)@24Hz; 2048x1536 (VGA)@85Hz me: NVIDIA Geforce GTX™ 1080 (only available via special bid model), DirectX 12, 8GB, PCIe 3.0 x16 adapter, one DVI-D, one HDMI, three DisplayPort, 180 watts, occupies two slots; Max resolution: 2560x1600 (DVI-D)@60Hz; 4096x2160 (HDMI)@60Hz					me: NVIDIA Geforce GTX™ 1080 (onlý available via special bid model), DirectX 12, 8GB, PCIe 3.0 x16 adapter, one DVI-D, one HDMI,											Slot 4: no slot, only bracket for optional port extension*
																		M.2 card slots: Two (one for WLAN, one for SSD/Optane)
								* Optional 2 front USB3.1 Type-C ports module occupies 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	<u> </u>										
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	splayPort,	DVI-D, or HDMI	on optio	nai graphics on s	ome models		preinstalled through downgrade • Microsoft Office preloaded;										
IEEE 1394*	Line-in (3.5mm), lir	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	, Qualcomm Atheros QCA6174A (dual band),				Qualcomm Atheros QCA6174A (dual band),			 Adobe® Reader® 							
		Wi-Fi + Bluetooth 4.1 combo adapter, 2x2 ome: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,						Cyberlink PowerDVD Create (DVD - DW)										
			ard, inter Duar E 1 combo adapter		51535-AC 3103,		Cardina a const	(DVD±RW)										
	Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265,						Environment	ENERGY STAR® 6.1, EPEAT™ Gold rating (North America), ErP Lot 3, GREENGUARD®, RoHS-compliant,										
			1 combo adapter		Noce AC 9965			TUV low noise verified (on some models)										
	Some: 11ac wirele Wi-Fi + Blu	ະວຣ, ເທ.∠ ເ uetooth 4∵	zaru, iritei Dual E 1 combo adaptei	and wife . Intel vP	eiess-AC 8265, ro technology su	oport. 2x2	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com										
Bluetooth™	Some: Bluetooth							, vi										













ThinkCentre M910x Tiny Platform Specifications

Processor	Intel® Celeron®, In	tel Pentiur	n®. or 6/7th Gene	eration In	itel Core™ i3 / i5 /	/ i7 Processor	Ethernet	Gigabit	ethernet. Inte	el Ethernet Connection I219-l	M(Jacks	sonville). Wake on I AN®
	,	Cores /	Frequency		Memory Support		Manageability			nt Technology 11.0 (Intel AMT 11.	` _	, , , , , , , , , , , , , , , , , , ,
	Processor Core i5-6500T		Base/Max(GHz) 2.5G / 3.1G	Cache 6 MB	(Up to) DDR4-2133	Graphics HD 530	Wanageabiiity	Intel vPr	o technology o	n some models (require choosing function through wireless connec	a vPro-sı	upport Wi-Fi
	Core i7-6700T	4/4	2.8G / 3.6G	8 MB	DDR4-2133	HD 530	Security chip			Module) 2.0*, TCG Certified	1011)	
	Core i5-7500T	4/4	2.7G / 3.3G	6 MB	DDR4-2100	HD 630			* Downgrade to TPM1.2 for the models with Win10 DG Win7 32 OS • Security slot (in rear for optional Kensington® MicroSaver® cable) • Hard disk password • Boot sequence control		S	
	Core i5-7600T	4/4	2.8G / 3.7G	6 MB	DDR4-2400	HD 630	Security features	• Secu				
	Core i7-7700T	4/8	2.9G / 3.8G	8 MB	DDR4-2400	HD 630						
	Core i5-6500	4/4	3.2G / 3.6G	6 MB	DDR4-2133	HD 530	•			t USB protection, allows keyboard/ • Boot without keyboard and mou • Individual USB port disablemen		
	Core i7-6700	4/8	3.4G / 4.0G	8 MB	DDR4-2133	HD 530			r-on passwor			usion switch
	Core i5-7500	4/4	3.4G / 3.8G	6 MB	DDR4-2400	HD 630			nistrator pass			
	Core i5-7600	4/4	3.5G / 4.1G	6 MB	DDR4-2400	HD 630	Keyboard	Some:	Lenovo Calli	ope Keyboard (USB connecto	r), black	
	Core i7-7700	4/8	3.6G / 4.2G	8 MB	DDR4-2400	HD 630				tional Keyboard (USB conne ope Wireless Keyboard (2.4G		
Memory	32GB max, DDR4	-2400* tv	n 260-pin SO-DI	MM sock	ets non-FCC		Mouse			ope Mouse (USB connector),		JSB receiver), black
Wichiory	dual-channel capa	ble						Some:	Lenovo Calli	ope Wireless Mouse (2.4GHz	via USE	3 receiver), black
	* System automati	ically clock	ks down for the p	rocessor	s with lower mem	ory controller	Mechanical	Tiny (11	_), black colo	r: metal case		·
Storage	Some: Hard Drive	e* / SATA (6.0Gb/s, 2.5", 54	00 rpm o	r 7200 rpm, APS]	 Toolle 	ss chassis o	pen		
	Some: Solid State	Drive (S	SD)* / SATA 6.00	ab/s, 2.5"), memory removal		
	(* 2.5" HDD/SSD a Some: M.2 SSD (v 4 32Gh/e			nal toolless c nal dust filter	nassis screw		
	RAID 0/1	support (F	AID preset only	available	via special bid m	odel)		Optio	nar adot mitor			101 1 1 1 1 1
.	Some: Intel Optai	ne™ Mem	ory (models with	7th gen	Core processor),	M.2				Dimensions (WxDxH		Weight (Approx.)
Optical	Some: DVD-RON Some: DVD Burn	er (DVD±l	RW), slim (9.0mn	kternal O n), via US	DD box SB external ODD	box		M910 I	iny only	7.05" X 7.20" X 1.36' 179mm X 182.9mm X 34.	5mm	2.91 lb (1.32 kg), vary by config
Onboard SATA Media reader	One onboard SATA None	TA 6.0Gb/s connector						With VI ODD b	ESA mount & ox	7.42" X 7.30" X 2.48' 188.4mm X 185.38mm X (3mm	3.66 lb (1.66 kg), vary by config
Graphics	Intel HD Graphics two DisplayPort™,	s 510/530 one optio	/610/630 in proce nal video port (H	essor, us DMI. VG	es main memory, A. 3rd DP. or USE	DirectX [®] 12, 3 3.1 Type-C			ESA mount &		· Cmm	3.66 lb (1.66 kg),
	with DisplayPort A	Iternate M	lode), up ṫo 3 ind	ependen	it displays;	, , ,		I/O box		188.4mm X 185.38mm X 6		vary by config
	Max resolution: 4096x2304 (DP)@60Hz; 4096x2304 (Type-C)@60Hz; 4096x2160 (HDMI)@24Hz; 1920x1200 (VGA)@60Hz						VESA mount Floor Stand			nt bracket kit, supports VESA r stand for vertical orientatior	75mm a	and 100mm
	Some: AMD Rade	eon™ RX 4 ienlavPort	460 , DirectX 12, (35 watts (TDP)	4GB, PC	le 3.0 x8 adapter independent disp	(low profile),	Power supply	ly 135 watts AC/DC adapter, autosensing, 88% PSU				
	along with	2 onboard	DisplayPort to	support ι	up to 6 independe	nt displays;	Limited warranty	³ Some:	1-vear or 3-	year, depot service / service	upgrad	es available
	Max resolu	ition: 5120)x2880 @60Hz (ι	up to 2 m	ini DisplayPort);		,			year, limited onsite service		
Monitor cable	Optional DP to VG	A, DP to I	Sx2160 @60Hz (ı DVI-D, DP to dua	up to 4 m I DP, min	ini DisplayPort) i DP to DP, or DP	to HDMI 1.4	Preload	Some:		Professional 32/64 Preload through downgrade listed)	ed appl	ications (only some
Chipset	Intel Q270 Chipse	et]		rights in Wir	idows 10 Pro 64-bit • Micro	oft Offic	e preloaded;
Front ports*	Two USB 3.1 Gen	1 (one is A	Always On and fa	st charge	e), one microphor	ne (3.5mm),	1		(not availabl	e with 7th Gen Intel purch	ase a pr	oduct key to activate
	one headphone / r	microphon	e combo jack (3.	5mm)				Some:	processor) Windows 10	Pro 64-bit - Only fo		
Rear ports*	Four USB 3.1 Gen									Library Od Ish		vnload link
	USB 3.1 Gen1), effor the models with	n BX 460	oranhics): Port 1	for IVGA	/ 3rd DP / HDMI	/ serial /				(vPro	models	only)
	USB 3.1 Type-C G	ien 1 (with	DisplayPort Alte	rnate Mo	ode)]; Port 2 for [s	erial]				- Only fo	r Windo	w 7
I/O box*	Optional external I	/O box, ex	tends two USB 2	2,0, two l	JSB 3.1 Gen1, ar	nd one serial				• Lenov	o Solution Think	on Center /antage Tools
	on rear, two USB 2 * Depending on man											ery Media
Audio support	High Definition (HI	· ·		, ,			-			 Adobe 	Reade	er [®]
		, ,				,	-			 Cybei (DVD: 		erDVD Create
WLAN ¹³		uetooth 4.	2 combo adapter	, 1x1								ro models only)
	Some: 11ac wirel				QCA6174A (dual	band),	Environment			, EPEAT™ Gold rating (North	America	a),
	Some: 11ac wirel	ess, M.2 (Sand Wire	eless-AC 3165,					UARD®, RoHS-compliant, ed (on some models)		
			2 combo adapter		aloce AC OOSE		MIL-SPEC test			ary certification (Low Pressur	· [Altituc	le]. High Temperature
	Some: 11ac wirel Wi-Fi + Bli		zard, intel Dual E 2 combo adapter		EIESS-AU 8205,		2 0. 20 1031	Low Te	mperature, Te	mperature Shock, Humidity,	Sand an	d Dust, Vibration, Shock,
	Some: 11ac wirel	ess, M.2 (Card, Intel Dual E	and Wire	eless-AC 8265,				, Solar Radia			
Divista sti Tu	Wi-Fi + Bli	uetooth 4.	2 combo adapter	, Intel vP	ro technology sup		Accessories	For con	npatible acce	ssories, please go to http://w	ww.lend	ovoquickpick.com
Bluetooth™	Some: Bluetooth * Hardware suppo											
	riaiuwaie suppo	113 11 4.2	, but will to moo	unu tall	ici oriiy supports	D1 4.1						





















ThinkCentre M920 SFF Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	, or 8th / 9th Ger	Intel Co	ore™ i3 / i5 / i7 / i9	Processor	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)		
	Processor	Cores / Threads	Frequency Base/Max(GHz)	Cache	Memory Support		WLAN	Some: 11ac wireless, M.2 Card, Realtek RTL8821CE (dual band),		
	Celeron G4900	2/2	3.1G	2 MB	(Up to) DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1 Some: 11ac wireless, M.2 Card, Realtek RTL8822BE (dual band),		
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 3165,		
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Wi-Fi + Bluetooth 4.2 combo adapter, 1x1		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, Wi-Fi + Bluetooth 4.2 combo adapter, 2x2		
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630		Some: 11ac wireless, M.2 Card, Intel Wireless-AC 9560 (dual band),		
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630		Wi-Fi + Bluetooth 5.0 combo adapter, Intel vPro technology support, 2x2		
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	Bluetooth	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter		
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN® Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCIe x4		
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630		Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)		
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);		
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	,	Intel vPro technology on some models (require choosing a vPro-support Wi-Fi		
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Coourity obio	adapter to enable vPro function through wireless connection)		
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified		
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security features	 Security slot (in rear for optional Kensington® MicroSaver® cable) Power-on password Administrator password 		
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Padlock loop Administrator password Hard disk password		
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control		
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		both keyboard and mouse • Boot without keyboard and mouse		
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		 Optional chassis intrusion switch Optional chassis E-Lock (special bid) Smart USB protection, allows keyboard. 		
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices		
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black		
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	,	Some: Lenovo Traditional Keyboard (USB connector), black		
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black		
Memory	64GB max, DDR4-26 * System automatical						r Mouse	Some: Lenovo Keyboard (PS/2 connector), black (only available via special I Some: Lenovo Calliope Mouse (USB connector), black		
Storage	Some: Hard Drive / Some: Solid State D Some: M.2 Solid Sta	SATA 6.00 rive (SSD	Gb/s, 2.5" or 3.5" 0) / SATA 6.0Gb/s	, 5400 rp	om or 7200 rpm	•		Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)		
Optical	* 128GB SSD M.2 (2: Some: Intel Optane ^T Some: DVD-ROM, S Some: DVD Burner	242) PCI Memory SATA 1.5€	e NVMe only sup / (not support Ce ab/s Drive, slim (ports PC eleron / P 9.0mm)	Cle 3.0 x 2, 16Gb/ Pentium Processo	's	Mechanical	 SFF (8.4L), black color, metal case (WxDxH) 3.6" X 11.4" X 13.5"; 92.5mm X 290.5mm X 343.5mm Approx. 13.23 lb (6 kg), weight may vary by configuration Toolless cover, disk, optical, extension card removal 		
Onboard SATA	Four onboard SATA 6 available via special b	6.0Gb/s co	onnectors, RAID			only		Optional dust filter Bay 1: Slim external ODD bay		
Media reader	Optional 7-in-1 media		,					Bay 2: 3.5", 1" high, internal, HDD/SSD		
Graphics	Intel UHD Graphics one VGA, two Display discrete graphics to s Max resolution: 4096: Some: NVIDIA Gefor two DisplayPo	yPort™, su support m x2304 (Di rce® GT 7 ort, 35 wa	upports 3 indepe ore displays; P)@60Hz; 2048; ′30 , DirectX 12, 2	ndent dis 1536 (Ve 2GB, PC	splays, works aloi GA)@50Hz le 2.0 x16 adapte	ng with	Floor Stand	Bay 3: 2.5", internal, HDD/SSD (optional bay) Slot 1: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 Slot 2: low-profile (length < 150mm, height < 68mm), PCle 3.0 x1 Slot 3: low-profile (length < 150mm, height < 68mm), PCle 3.0 x16 (x4 signal) Slot 4: no slot, only bracket for optional port extension M.2 card slots: Two (one for WLAN, one for SSD/Optane) Optional system floor stand for vertical orientation		
Monitor cable	Optional DP to VGA of Display with intel inte	dongle, D	P to DVI-D dong	e, DP to	dual DP dongle (for Collage	Power supply	Some: 180 watts, autosensing, 85% PSU Some: 210 watts, autosensing, 85% PSU 260 watts, autosensing, 85% PSU (only qualifylia via special bid)		
Chipset	Intel Q370 Chipset						I the transfer of	Some: 260 watts, autosensing, 92% PSU (only available via special bid)		
Front ports* (Std.)	2x USB 3.1 Gen2, 2x 1x microphone (3.5m						Limited warranty	Some: 1-year or 3-year, depot service / service upgrades available Some: 1-year or 3-year, limited onsite service / service upgrades available		
Front ports* (Opt. Rear ports* (Std.)	1x microphone (3.5mm), 1x headphone / microphone combo jack (3.5mm) t ports* (Opt.) <i>Optional:</i> 1x media reader ports* (Std.) 4x USB 3.1 Gen1, 1x serial (9-pin), 1x ethernet (RJ-45), 1x VGA, 2x DisplayPort,				, ,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	1x line-out (3.5mm)) <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		
Rear ports* (Opt.) Optional: 2x USB 2.0, 2x USB 3.1 Gen1 via PCle x1, 2x USB 3.1 Type-C Gen2 via PCle x4 (special bid only), 1x 2nd serial (9-pin), 4x serial (9-pin) via PCle x1, 1x parallel (25-pin), 2x PS/2 ports (keyboard/mouse), 1x Thunderbolt 3 (combo USB3.1 Type-C Gen 2 / DisplayPort) via PCle x4 (available on 09/30/2018), additional RJ-45 and video ports available on optional graphics or ethernet card * Depending on many factors, actual data transfer speed may be lower than theoretical speed						Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			



















ThinkCentre M920 Tiny Platform Specifications

Processor	Intel® Celeron®, Intel F	Pentium®.	or 8th / 9th Gen	Intel Co	ore™ i3 / i5 / i7 / i	9 Processor	Bluetooth	Some: Bluetooth 4.2	2/5.0 wireless, inte	grated in Wi-Fi + B	combo adapter
	Processor	Cores /	Frequency		Memory Support	Integrated	Ethernet (Opt.)	Gigabit ethernet, Inte	el Ethernet Conne	ction I219-LM(Jacks	sonville), Wake on LAN® rnet, 4x RJ-45, PCIe x4
	Celeron G4900T	Threads 2 / 2	Base/Max(GHz) 2.9G	2 MB	(Up to) DDR4-2400	Graphics UHD 610	L		-		illet, 4x hJ-45, PGIE X4
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610	Manageability	Intel Active Manager Intel vPro technology	v on some models	(require choosing a	vPro-support Wi-Fi
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610		adapter to enable vP	ro function through	h wireless connection	on)
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630	Security chip	Discrete TPM 2.0, TO	TPM 2.0, TCG Certified		
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630	Security features	Security slot (in real	ty slot (in rear for optional gton® MicroSaver® cable) is intrusion switch Boot sequence control Boot without keyboard and mouse Individual USB port disablement		
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610		Chassis intrusion s			
	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 	dministrator password mouse only, blocks all storage devi		
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630		 Hard disk passwor 			
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calli			
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630		Some: Lenovo Tradi Some: Lenovo Calli	itional Keyboard (L	JSB connector), bla	CK ISB rocciver) black
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	Mouse	Some: Lenovo Calli	ope Mouse (USB (connector), black	ob receiver), black
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630		Some: Lenovo Finge	erprint Mouse (US	B connector), Wind	ows Hello support, black
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630		Some: Lenovo Calli	ope Wireless Mou	se (2.4GHz via USE	3 receiver), black
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color			
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630		Toolless chassis or			rew)
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630		Toolless HDD, SSEOptional dust filter		ll	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666	UHD 630				3.0 x8 slot (low-profi	le), two M.2 slots (one
	Core i9-9900T	8 / 16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630					d are mutually exclusive
Memory	32GB max, DDR4-266						1		Dimension	ns (WxDxH)	Weight (Approx.)
Storage		Some: Hard Drive / SATA 6.0Gb/s, 2.5", 5400 rpm or 7200 rpm				ory controller		Tiny only	7.05" X 7.	20" X 1.36" 9mm X 34.5mm	2.91 lb (1.32 kg), vary by config
· ·	Some: Solid State Dr Some: M.2 SSD / PC * 128GB SSD M.2 (22	le NVMe	, PCIe 3.0 x 4*, 3	32Gb/s	Cle 3.0 x 2, 16Gh	n/s		With VESA mount & ODD box	7.42" X 7.	30" X 2.48" 5.38mm X 63mm	3.66 lb (1.66 kg), vary by config
Optical	Some: Intel Optane™ Some: DVD-ROM, sli Some: DVD Burner (I	Memory m (9.0mr	(not support Ce n), via USB exte	leron / P rnal ODI	Pentium Processo D box	or), M.2	VESA mount Floor Stand				nd 100mm
Onboard SATA	One onboard SATA 6.	0Gb/s co	nnector	via OSD	external ODD t	, OX	Power supply	Some: 65 watts AC/DC adapter, autosensing, 88% PSU			
Graphics	Intel HD Graphics 61 DisplayPort™, one HD	MI, one o	optional video po	ort (2nd F	HDMÍ, VGA, 2nd	DP,		Some: 90 watts AC/ Some: 135 watts AC			
	or USB 3.1 Type-C Ge Max resolution: 4096x	2304 (DF	P)@60Hz; 4096x	2304 (Ty	/pe-C)@60Hz;		Limited warranty	Some: 1-year or 3-year, limited onsite service / service upgrades availab			
Monitor cable	Optional DP to VGA d Display with intel integ	ongle, DF		e, DP to	dual DP dongle		Preload				
Chipset	Intel Q370 Chipset	gratou gre	(prii00), 01 D1 to	TIDIVII I	.+ dorigio		-	Some: Windows 10 Preloaded applicati		isted)	
	* one USB 3.1 Gen1 (A							 Lenovo Vantage Microsoft Office pr 		iotouj	
Rear norts (Std.)	one microphone (3.5n * 2x USB 3.1 Gen2, 2x							purchase a produc	ct key to activate		
	* Two optional ports (mi	utually ex	clusive with PCI	e càrd):	Port 1 for VGA /	2nd DP /		Cyberlink PowerD	VD (only for model	Is with DVD / DVD±	RW)
	2nd HDMI / serial / US	SB 3.1 Ty	pe-C Gen 1 with	DP func	ction); Port 2 for s	serial;		Cyberlink Power20LinkedIn	30 (only for mode	is with DVD±RW)	
	Optional ports via PCI PCIe x1, 1x Thunderb	le card: 2	x USB 3.1 Gen1	via PCI	e x1, 4x serial (9	I-pin) via		Intel Unite (Machin	ne Type 10V8 mod	lels only)	
	* Depending on many fac						Environment	ENERGY STAR® 7.0). FPFAT™ Silver r	rating (North Americ	a), FrP Lot 3, TCO.
Audio support	Realtek ALC233VB2 /		<u>.</u>			F 7 7 7		TUV ultra low noise	verified (coming so	oon, on some mode	ls), RoHS-compliant
WLAN	Some: 11ac wireless,	M.2 Car	d, Realtek RTL8	821CE (MIL-SPEC test				e], High Temperature, d Dust, Vibration, Shock,
	Some: 11ac wireless.	. M.2 Car	ombo adapter, 1 d, Realtek RTL8	822BE (dual band),			Fungus, Solar Radia	tion)		
	Some: 11ac wireless	, M.2 Car		nd Wirele	ess-AC 3165,		Accessories	For compatible acces	ssories, please go	to http://smartfind	l.lenovo.com
	Some: 11ac wireless	, M.2 Car		nd Wirele	ess-AC 8265,						
			ombo adapter, 2		O (dual band)						
	Some: 11ac wireless Wi-Fi + Blueto		d, intel vvireless ombo adapter, li			port, 2x2					





















ThinkCentre M920 Tower Platform Specifications

Processor	Intel® Celeron®, Intel	Pentium®	or 8th /9th Gen	Intel Co	re™ i3 / i5 / i7 / i9	Processor		USB3.1 Type-C Gen 2 / DisplayPort) via PCIe x4 (available on 09/30/2018),			
	Processor	Cores /	Frequency	Cache	Memory Support			additional RJ-45 and video ports available on optional graphics or ethernet card			
		Threads	Base/Max(GHz)		(Up to)	Graphics		* Depending on many factors, actual data transfer speed may be lower than theoretical speed			
	Celeron G4900	2/2	3.1G	2 MB	DDR4-2400	UHD 610	Audio support	High Definition (HD) Audio, Realtek ALC233VB2 / internal speaker (2 watt)			
	Celeron G4920	2/2	3.2G	2 MB	DDR4-2400	UHD 610	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8821CE (dual band), 1x1			
	Celeron G4930	2/2	3.2G	2 MB	DDR4-2400	UHD 610		Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL8822BE (dual band), 2x2 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band Wireless-AC 3165, 1x1			
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610		Some: 11ac wireless, M.2 Card, Intel Dual Band Wireless-AC 8265, 2x2			
	Pentium Gold G5400 Pentium Gold G5500	2/4	3.7G 3.8G	4 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 630		Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-AC 9560 (dual band),			
	Pentium Gold G5600	2/4	3.8G 3.9G	4 MB 4 MB	DDR4-2400 DDR4-2400	UHD 630		Intel vPro technology support, 2x2			
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400 DDR4-2400	UHD 610	Bluetooth™	Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi + BT combo adapter Gigabit ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN®			
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400 DDR4-2400	UHD 630	Ethernet	Some: Intel Ethernet Server Adapter I350-T4, gigabit ethernet, 4x RJ-45, PCle x4			
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Bitland BN8E88, gigabit ethernet, 1x RJ-45, PCIe x1 (special bid only)			
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);			
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing a vPro-support Wi-Fi			
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	Security chip	adapter to enable vPro function through wireless connection) Discrete TPM 2.0, TCG Certified			
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	, ,	s • Security slot (in rear for optional • Power-on password			
	Core i7-8700	6 / 12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	Security leatures	Kensington® MicroSaver® cable) • Administrator password			
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630		Padlock loop Hard disk password			
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630		Optional cable lock to physically lock Boot sequence control			
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630		 both keyboard and mouse Optional chassis intrusion switch Boot without keyboard and mouse Individual USB port disablement 			
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630		Optional chassis E-Lock (special bid)			
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		mouse only, blocks all storage devices			
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), black			
	Core i7-9700	8/8	3.0G / 4.7G	12 MB	DDR4-2666	UHD 630	1	Some: Lenovo Traditional Keyboard (USB connector), black			
	Core i9-9900	8 / 16	3.1G / 5.0G	16 MB	DDR4-2666	UHD 630		Some: Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black Some: Lenovo Keyboard (PS/2 connector), black (only available via special bid)			
Memory	64GB max, DDR4-26 * System automatical						Mouse	Some: Lenovo Calliope Mouse (USB connector), black Some: Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black			
Storage	Some: Hard Drive / Some: Solid State D	rive (SSD) / SATA 6.0Gb/s	s, 2.5"	·			Some: Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black Some: Lenovo Mouse (PS/2 connector), black (only available via special bid)			
	* SSD M.2 (2242) PC Some: Intel Optane	Cle NVMe	only supports P	Cle 3.0 x	2, 16Gb/s		Mechanical • Tower (18L), black color, metal case • (WxDxH) 6.5" X 12.65" X 16.15"; 165mm X 321.35mm X 410.25mm				
Optical	Optional DVD-ROM of	or DVD Bu	rner (DVD±RW)	. SATA 1	.5Gb/s Drive. slin	n (9.0mm)		 Approx. 15.45 lb (7 kg), weight may vary by configuration Toolless cover, disk, optical, extension card removal 			
Onboard SATA	Four onboard SATA 6	6.0Gb/s co	nnectors, RAID					Optional carry handle, dust filter			
Madia raadar	available via special b	bid model)					Bay 1: Slim external ODD bay			
Media reader	Optional 7-in-1 media				D: 174%	10	_	Bay 2: 5.25", 1.6" high, external, ODD / optional front access HDD Bay 3: 3.5", 1" high, internal, HDD/SSD			
Graphics	Intel UHD Graphics one VGA, two Display	610/630 I	n processor, use	s main n	nemory, DirectX®	12, na with		Bay 4: 3.5", 1" high, internal, HDD/SSD (optional bay, bay comes with disk)			
	discrete graphics to s			nacm an	spiays, works alo	ing with		Bay 5: 2.5", internal, HDD/SSD (optional bay)			
	Max resolution: 4096:	x2304 (DI	P)@60Hz;2048x	1536 (V	GA)@50Hz			Notes: M920 Tower supports up to 3 SATA devices (ODD/HDD/SSD) and			
	Some: NVIDIA Gefor			2GB, PC	le 2.0 x16 adapte	er,		1 eSATA device (front access HDD) Slot 1: full-length (< 268mm) full-height (< 112mm), PCIe 3.0 x16			
	two DisplayPo		สร; :160 (DisplayPor	t)@60Hz				Slot 2: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x1			
	Some: NVIDIA Gefor	rce GTX	1060 (DisplayFor	l only). D	, irectX 12. 6GB. F	Cle 3.0		Slot 3: full-length (< 268mm) full-height (< 112mm), PCle 3.0 x16 (x4 signal)			
	x16 adapter, 1	1x DVI-D,	1x HDMI, 3x DP,	120 wat	ts, occupies two	slots;		Slot 4: no slot, only bracket for optional port extension			
)Hz; 409	6x2160 (HDMI)@	060Hz		M.2 card slots: Two (one for WLAN, one for SSD/Optane)			
Monitor Cable	5120x3200 (D Optional DP to VGA ()P)@60H:	Z P to DVI D donal	0 DB to	dual DP dangla	(for Collago	Power supply	Some: 180 watts, autosensing, 85% PSU			
World Gablo	Display with intel inte	grated gra	aphics), or DP to	HDMI 1	4 dongle	(ioi collage		Some: 250 watts, autosensing, 85% PSU Some: 400 watts, autosensing, 92% PSU (only available via special bid)			
Chipset	Intel Q370 Chipset	<u> </u>					l insite al community				
) 2x USB 3.1 Gen2, 2x						Limited warranty	Some: 1-year or 3-year, limited onsite service / service upgrades available			
Front ports* (Opt.	1x microphone (3.5m) Optional: 1x media re	eader	•		, ,	,	Preload	Some: Windows® 10 Pro 64-bit Some: Windows 10 Home 64-bit			
	4x USB 3.1 Gen1, 1x 1x line-out (3.5mm) Optional: 2x USB 2.0						Environment	ENERGY STAR® 6.1, EPEAT™ Silver rating (North America), ErP Lot 3, TCO, TUV low noise verified (coming soon, on some models), RoHS-compliant			
. ισαι ροι ισ (Ορι.	PCIe x4 (special bid (1x parallel (25-pin), 2	only), 1x 2	2nd serial (9-pin)	, 4x seria	al (9-pin) via PCI	e x1,	Accessories	For compatible accessories, please go to http://smartfind.lenovo.com			
	paranor (20 pin), 2	, O, _ pc	(noyboard/iii	5 400/, 17		00.1100					



















ThinkCentre M920x Tiny Platform Specifications

Processor	Intel® Celeron®, Intel Pen	tium®. or 8	th / 9th Gen Intel C	Core™ i3	/ i5 / i7 / i9 Process	or		4x Mini DisplayPort, up to 4 independent display	vs. works along with	
	Processor	Cores /	Frequency	Cache	Memory Support	Integrated	1	onboard DP and HDMI to support up to 6 indepe Max resolution: 5120x2880@60Hz ((up to 2 M	endent displays;	
		Threads	Base/Max(GHz)		(Up to)	Graphics	4	4096x2160@60Hz ((up to 4 M	lini DisplayPort)	
	Celeron G4900 Celeron G4920	2/2	3.1G 3.2G	2 MB 2 MB	DDR4-2400 DDR4-2400	UHD 610 UHD 610	Monitor cable	Optional DP to VGA dongle, DP to DVI-D dongle, DP to d with intel integrated graphics), or DP to HDMI 1.4 dongle,	lual DP dongle (for Collage Display	
	Celeron G4930	2/2	3.2G 3.2G	2 MB	DDR4-2400 DDR4-2400	UHD 610	Chipset	Intel Q370 Chipset	, Will il Di to Di	
	Celeron G4950	2/2	3.3G	2 MB	DDR4-2400	UHD 610	1∟	<u>'</u>		
	Pentium Gold G5400	2/4	3.7G	4 MB	DDR4-2400	UHD 610	Front ports (Std.)*	one USB 3.1 Gen1 (Always On and fast charge), one US one microphone (3.5mm), one headphone / microphone (B 3.1 Type-C Gen 1,	
	Pentium Gold G5500	2/4	3.8G	4 MB	DDR4-2400	UHD 630	Rear ports (Std.)*	2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45)), 1x DP, 1x HDMI	
	Pentium Gold G5600	2/4	3.9G	4 MB	DDR4-2400	UHD 630	Rear ports (Opt.)*	Two optional ports (mutually exclusive with PCIe card): F	Port 1 for VGA / 2nd DP / 2nd HDMI /	
	Pentium Gold G5420	2/4	3.8G	4 MB	DDR4-2400	UHD 610	1	serial / USB 3.1 Type-C Gen 1 with DP function); Port´2 fo Optional ports via PCIe card: 2x USB 3.1 Gen1 via PCIe	or serial; x1. 4x serial (9-pin) via PCIe x1. 1x	
	Pentium Gold G5620	2/4	4.0G	4 MB	DDR4-2400	UHD 630	1	Thunderbolt 3 (combo USB3.1 Type-C Gen 2 / DP) via Po	Cle x4	
	Core i3-8100	4/4	3.6G	6 MB	DDR4-2400	UHD 630	1	* Depending on many factors, actual data transfer speed	,	
	Core i3-8300	4/4	3.7G	8 MB	DDR4-2400	UHD 630	Audio support	Realtek ALC233VB2 / optional internal speaker (1.5 watt	or 2 watt)	
	Core i5-8400	6/6	2.8G / 4.0G	9 MB	DDR4-2666	UHD 630	WLAN	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL882		
	Core i5-8500	6/6	3.0G / 4.1G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Realtek RTL882 Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band	P2BE (dual band), 2x2	
	Core i5-8600	6/6	3.1G / 4.3G	9 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT 4.2, M.2 Card, Intel Dual Band		
	Core i7-8700	6/12	3.2G / 4.6G	12 MB	DDR4-2666	UHD 630	1	Some: 11ac Wi-Fi + BT 5.0, M.2 Card, Intel Wireless-Al		
	Core i3-9100	4/4	3.6G / 4.2G	6 MB	DDR4-2400	UHD 630	Bluetooth	Intel vPro technology support, 2x2 Some: Bluetooth 4.2/5.0 wireless, integrated in Wi-Fi +	BT combo adapter	
	Core i3-9300	4/4	3.7G / 4.3G	8 MB	DDR4-2400	UHD 630	Ethernet	Gigabit ethernet, Intel Ethernet Connection I219-LM(Jack	sonville), Wake on LAN®	
	Core i3-9320	4/4	3.7G / 4.4G	8 MB	DDR4-2400	UHD 630	Ethernet (Opt.)	Some: Intel Ethernet Server Adapter I350-T4, gigabit eth	nernet, 4x RJ-45, PCIe x4	
	Core i5-9400	6/6	2.9G / 4.1G	9 MB	DDR4-2666	UHD 630	Manageability	Intel Active Management Technology 12 (Intel AMT 12);	D	
	Core i5-9500	6/6	3.0G / 4.4G	9 MB	DDR4-2666	UHD 630		Intel vPro technology on some models (require choosing adapter to enable vPro function through wireless connect	a vPro-support vvi-Fi	
	Core i5-9600	6/6	3.1G / 4.6G	9 MB	DDR4-2666	UHD 630	Security chip	Discrete TPM 2.0, TCG Certified	,	
	Celeron G4900T	2/2	2.9G	2 MB	DDR4-2400	UHD 610	Security features		uence control	
	Celeron G4930T	2/2	3.0G	2 MB	DDR4-2400	UHD 610]	Kensington® MicroSaver® cable) • Chassis intrusion switch • Individual	out keyboard and mouse	
	Pentium Gold G5400T	2/4	3.1G	4 MB	DDR4-2400	UHD 610]	 Power-on password Smart US 		
	Pentium Gold G5500T	2/4	3.2G	4 MB	DDR4-2400	UHD 630		 Administrator password mouse or 	nly, blocks all storage devices	
	Pentium Gold G5600T	2/4	3.3G	4 MB	DDR4-2400	UHD 630		Hard disk password		
	Pentium Gold G5420T	2/4	3.2G	4 MB	DDR4-2400	UHD 610	Keyboard	Some: Lenovo Calliope Keyboard (USB connector), bla Some: Lenovo Traditional Keyboard (USB connector), b	ick	
	Core i3-8100T	4/4	3.1G	6 MB	DDR4-2400	UHD 630	1	Some: Lenovo Calliope Wireless Keyboard (2.4GHz via	uSB receiver), black	
	Core i3-8300T	4/4	3.2G	8 MB	DDR4-2400	UHD 630	Mouse	Some: Lenovo Calliope Mouse (USB connector), black		
	Core i5-8400T	6/6	1.7G / 3.3G	9 MB	DDR4-2666	UHD 630	1	Some: Lenovo Fingerprint Mouse (USB connector), Will Some: Lenovo Calliope Wireless Mouse (2.4GHz via U	ndows Hello support, black	
	Core i5-8500T	6/6	2.1G / 3.5G	9 MB	DDR4-2666	UHD 630	Machaniaal	,	OB receivery, black	
	Core i5-8600T	6/6	2.3G / 3.7G	9 MB	DDR4-2666	UHD 630	Mechanical	Tiny (1L), black color; metal case Toolless chassis open (need optional toolless chassis s	screw)	
	Core i7-8700T	6/12	2.4G / 4.0G	12 MB	DDR4-2666	UHD 630	4	 Toolless HDD, SSD, memory removal 	,	
	Core i3-9100T	4/4	3.1G / 3.7G	6 MB	DDR4-2400	UHD 630	4	 Optional dust filter one 2.5" bay for HDD/SSD, one PCIe 3.0 x8 slot (low-pro 	file) three M 2 slots (one for WI AN	
	Core i3-9300T	4/4	3.2G / 3.8G	8 MB	DDR4-2400	UHD 630	4	two for M.2 SSD), 2.5" HDD/SSD and PCIe card are muti		
	Core i5-9400T	6/6	1.8G / 3.4G	9 MB	DDR4-2666	UHD 630	4	Dimensions (WxDxH)		
	Core i5-9500T	6/6	2.2G / 3.7G	9 MB	DDR4-2666	UHD 630	4		Weight (Approx.)	
	Core i5-9600T	6/6	2.3G / 3.9G	9 MB	DDR4-2666	UHD 630	4	Tiny only 7.05" X 7.20" X 1.36" 179mm X 182.9mm X 34.5r	2.91 lb (1.32 kg), mm vary by config	
	Core i7-9700T	8/8	2.0G / 4.3G	12 MB	DDR4-2666 DDR4-2666	UHD 630	4	With VESA mount & 7.42" X 7.30" X 2.48"	3.66 lb (1.66 kg),	
	Core i9-9900T	8/16	2.1G / 4.4G	16 MB	DDR4-2666	UHD 630	<u> </u>	ODD box 188.4mm X 185.38mm X 63		
Memory	32GB max, DDR4-2666* * System automatically c	locks down	for the processors	s with low	er memory control	ler	VESA mount Floor Stand	Optional VESA mount bracket kit, supports VESA 75mm Optional system floor stand for vertical orientation	and 100mm	
Storage	Some: Hard Drive / SA	TA 6.0Gb/s	, 2.5", 5400 rpm o	r 7200 rp	m		Power supply	135 watts AC/DC adapter, autosensing, 88% PSU		
	Some: Solid State Drive Some: M.2 SSD (support	art un tá tw	n M 2 SSD) / PCIe	NVMe	PCIe 3 0 x 4* 32GI	h/s	- '''			
	BAID 0/1 sunno	rt (RAID ni	reset only available	via snéo	cial hid model)	o, o,	Limited warranty	Some: 1-year or 3-year, depot service / service upgra Some: 1-year or 3-year, limited onsite service / serv		
	* 128GB SSD M 2 (2242) PCIe NVI	vie only supports F	7CIE 3 0 1	(2 16Gh/s		Preload	Some: Windows® 10 Pro 64-bit	ieo apgiados arailabio	
Optical	Some: Intel Optane™ N Some: DVD-ROM, slim	(9.0mm).	via USB external C	/ Penliun DDD box	1 Processor), IVI.2		Teload	Some: Windows 10 Home 64-bit		
Onboard SATA	Some: DVD Burner (D\ One onboard SATA 6.0G	/D±RW), sl	lim (9.0mm), via U	SB exteri	nal ODD box		Environment	ENERGY STAR® 7.0, EPEAT™ Silver rating (North Ameri TUV ultra low noise verified (coming soon, on some mod		
Graphics	Intel HD Graphics 610/6	30 in proc	essor. uses main n	nemory, [DirectX® 12, one Di	splayPort™,	MIL ODEO : :	<u> </u>		
·	one HDMI, one optional or USB 3.1 Type-C Gen1	video port (with Displa	(2nd HDMI, VGA, 2 ayPort function), up	2nd DP, p to 3 ind	ependent displays;		MIL-SPEC test	MIL-STD-810G military certification (Low Pressure [Altitu Low Temperature, Temperature Shock, Humidity, Sand ar Solar Radiation)	dej, High Temperature, nd Dust, Vibration, Shock, Fungus,	
	Max resolution:c4096x23 4096x2 Some: AMD Radeon™	216Ò (ońbo	ard HDMI)@24Hz	: 2048x1	536 (VGA)@50Hz		Accessories	For compatible accessories, please go to http://smartfin	d.lenovo.com	













ThinkSmart Hub 500 Platform Specifications

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

See footnotes for more detailed information

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ThinkCentre Tiny-in-One (TIO) 22

Model	10LKPAR6++ / 10L	KPAT6++		Ī
Form factor			e when optional Tiny slots into	1
Commontible Time		clean cabling and effortle		
Compatible Tiny:	M53 Tiny, Chromet		y*, M83 Tiny, M73 Tiny*, or	
	* Non-TIO models	can't be turned on by pres	sing power button of TIO 22	
Panel	TFT-LCD, In-Plane	Switching (IPS), White LE	D backlight]
Viewable image size Max view area (W x H)	18.74" x 10.54" / 47	agonal 76.06mm x 267.79mm		
Bezel Width	Top / Side: 2mm, B	ottom: 16.3mm		
Optimum resolution Aspect ratio	1920x1080 16:9			
Pixel pitch (mm)	0.24795mm			
Dot/Pixel per Inch Brightness	102.4 dpi 250 nits or cd/m² (t	ypical)		
Contrast ratio	1000:1 (typical)	,		
Pixel response time Color gamut	7ms 72%			
Anti-reflective	Anti-glare		-1	
Preset resolutions		ontal, 178° (+/- 89°) vertic	aı	1
Freser resolutions	640x350 @ 70Hz 640x480 @ 60Hz,	66Hz, 72Hz, 75Hz		
	720x400 @ 70Hz	70U- 75U-		
	800x600 @ 60Hz, 1024x768 @ 60Hz.			
	1152x864 @75Hz			
	1280x800 @ 60Hz 1280x1024 @ 60H			
	1366x768 @ 60Hz			
	1440x900 @ 60Hz 1600x1200 @ 60Hz			
	1680x1050 @ 60H	_		
Presets / user settings	1920x1080 @ 60H Presets: 25; user se			
On screen display	On screen display	with digital user controls (8	3 languages)	1
Control features		O mode / standalone mon sources) / Back button, Lef	itor mode, switches video /	
		Selection button / Menu bu		
Tiny-in-One Power On			ver button positioned on TIO	
Front ports		o USB 2.0 (when M73 or N	y support, see compatible list) 1/153 installed or USB 2.0	
·		upstream port), one head	Iphone / microphone combo	
	jack (3.5mm) * The USB ports ar	e only available when a Ti	ny is istalled or a PC is	
Oide mente	connected via USB	upstream port		
Side ports Rear ports		oy installed Tiny (optional) 2 port, one USB upstream	port, one power connector	
3-in-1 Cable	Undetachable 3-in-	1 cable (Power connecter,	USB 3.0 [supports USB 3.0/	
Internal Speaker	USB 2.0], DisplayP 1.5 watt x1	ort 1.2), only for connecting	g to Tiny installed (optional)	
Security	Security keyhole fo		able lock (Kensington® lock	1
	compatible), locks offered by Tiny inst	optional Tiny with TIO 22 to	ogether, more security features	1
Mechanical	Dimensions	TIO 22 without stand	TIO 22 with stand	1
	W x D x H (inch)	19.25 x 2.65 x 12.47	19.25 x 9.90 x 14.02 - 18.35	
	W x D x H (mm)			1
	** Y D Y U (IIIIII)	489.06 x 67.2 x 316.78	489.06 x 251.4 x 356.07 - 466.07	
	Weight (approximately)	11.27 lb /5.1	1 kg (with stand)	

Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Adjustable stand	Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 15.57 watts typical, 35 watts maximum, <0.5 watts standby / suspend
Limited warranty ³	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
VESA-compliant ² Ergonomics Emission standards Environmental Windows certifications	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307 FCC Class B TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0 EPEAT™ Gold rating, ULE Gold, TUV, VOC Windows 7, Windows 8/8.1, and Windows 10 certified
Ship group	TIO 22 (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com

	ThinkCentre Tiny-in-One 22 Compatible list								
Model	M900 Tiny, M700 Tiny, M600 Tiny,	M93/p Tiny,	Chromebox						
	M83 Tiny, M53 Tiny	M73 Tiny							
Turn on TIO and									
Tiny together via	All models	All models	Not support						
Alt + P on USB KB									
Turn on TIO and									
Tiny together via	All models	TIO models	All models						
TIO Power Button									













ThinkCentre Tiny-in-One (TIO) 22 Gen3

Model	Non-touch model: Touch model:	10R1PAR1++/10R1PAR1++/10R0PAR1++/10R0PAR1		ı
Form factor			ience when optional Tiny slots into	1
Compatible Tiny:		ean cabling and effortle 00 / M700 / M600 / M7	ess setup 15 / M93/p* / M83 / M73* / M53 /	
,	Chromebox Tiny	can't be turned on by	oressing power button of TIO	Ē
Denel			<u> </u>	F
Panel	Notes: In-Plane Sv	witching may refer to V	**, White LED backlight A, PLS, and IPS panels	L
Viewable image size	21.5" (546.1mm) d	iagonal		}
Max view area (W x H) Bezel Width	Top / Side: 2mm, B	76.1mm x 267.8mm		
Native resolution	1920x1080	ottom: LL: min		Ì
Multi-touch		nulti-touch, supports W	lake on Touch	١.
Aspect ratio	16:9 0.24795mm			١
Pixel pitch (mm) Dot/Pixel per Inch	102.4 dpi			1
Brightness	250 nits or cd/m² (t	typical)		
Contrast ratio	1000:1 (typical)			1
Pixel response time		er drive to 4ms, 6ms		
Color gamut Anti-reflective	72% Anti-glare			
Viewing angle at 10:1 Cl		zontal, 178° (+/- 89°) ve	ertical	
Preset resolutions	640x350 @ 70Hz			
	640x480 @ 60Hz,	66Hz, 72Hz, 75Hz		
	720x400 @ 70Hz 800x600 @ 60Hz,	72Hz 75Hz		
	1024x768 @ 60Hz			
	1152x864 @75Hz			
	1280x800 @ 60Hz			
	1280x1024 @ 60H 1366x768 @ 60Hz			
	1440x900 @ 60Hz			
	1600x1200 @ 60H			
	1680x1050 @ 60H			
Procests / user cottings	1920x1080 @ 60H Presets: 25; user s			
Presets / user settings			la (9 languages)	ł
On screen display Control features		with digital user contro n	g button (TIO / monitor mode),	
Common locatorios	Right / Br	ightness button, Enter	/ Menu button, Power button	
	Bottom: Volume up	p button, Volume down	button	
Tiny-in-One Power On			Power button positioned on TIO	
Side ports (TIO)			e Tiny support, see compatible list) B or M53 installed or USB 2.0	
Oldo porto (110)	connected via USE		of Mod motalied of GGB 2.0	
			en a Tiny is istalled or a PC is	
Cido porto (Tipu)		via USB upstream por		
Side ports (Tiny) Rear ports		by installed Tiny (optio	nai) am port, one power connector	
3-in-1 Cable	Undetachable 3-in-	-1 cable (Power conne	cter, USB [supports USB 3.1 Gen1	
	/ USB 2.01. Display	Port), only for connect	ing to Tiny installed (optional)	
Camera	720p camera with	dual microphone for V	OIP, LED indicator	
Internal Speaker	2 watt x2			ł
Security		optional Tiny with TIO	al cable lock (Kensington® lock together, more security features	
Mechanical	Dimensions	TIO without stand	TIO with stand	
	W x D x H (inch)	19.26 x 2.85 x 13.35	19.26 x 10.76 x 14.59 - 18.93	
	W x D x H (mm)	489.3 x 72.5 x 339	489.3 x 273.3 x 370.7 - 480.7	
	Weight (Approx.)	7.01 lb / 3.19 kg	11.77 lb / 5.34 kg	

	Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
,	Adjustable stand	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; Pivot: clockwise 0° to 90°
4	Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 19 watts typical, 32 watts maximum, <0.5 watts standby / suspend
	Limited warranty	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
	VESA-compliant Ergonomics Emission standards Environmental	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307, TUV Eye Comfort certified FCC Class B TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0, EPEAT™ Silver rating, ULE Gold, TUV, VOC
	Windows certifications	Windows 7 and Windows 10 certified
	Ship group	TIO (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
	Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com
1		

ThinkCentre Tiny-in-One 22 Gen3 Compatible list								
Model	M910 / M710 / M900 / M700 /	M93/p Tiny,	Chromebox					
	M600 / M715 / M83 / M53 Tiny	M73 Tiny						
Turn on TIO and								
Tiny together via	All models	All models	Not support					
Alt + P on USB KB								
Turn on TIO and								
Tiny together via	All models	TIO models	All models					
TIO Power Button								













ThinkCentre Tiny-in-One (TIO) 24

Model	10LLPAR6++ / 10L	LPAT6++						
Form factor		a full All-In-One experience clean cabling and effortle	e when optional Tiny slots into					
Compatible Tiny:		•	y*, M83 Tiny, M73 Tiny*, or					
	M53 Tiny, Chromebox * Non-TIO models can't be turned on by pressing power button of TIO 24							
Panel								
Viewable image size	TFT-LCD, In-Plane Switching (IPS), White LED backlight 23.8" (604.7mm) diagonal							
Max view area (W x H) Bezel Width	21.06" x 12.32" / 535.0mm x 313.0mm Top / Side: 2mm, Bottom: 16.3mm							
Optimum resolution	1920x1080							
Aspect ratio Pixel pitch (mm)	16:9 0.2745mm							
Dot/Pixel per Inch Brightness	92.6 dpi 250 nits or cd/m ² (t	vnical)						
Contrast ratio	1000:1 (typical)	ypicai)						
Pixel response time Color gamut	7ms 72%							
Anti-reflective	Anti-glare		-1					
		ontal, 178° (+/- 89°) vertic	al					
Preset resolutions	640x350 @ 70Hz 640x480 @ 60Hz,	66Hz, 72Hz, 75Hz						
	720x400 @ 70Hz 800x600 @ 60Hz,	79Hz 75Hz						
	1024x768 @ 60Hz							
	1152x864 @75Hz 1280x800 @ 60Hz							
	1280x1024 @ 60H	z, 72Hz, 75Hz						
	1366x768 @ 60Hz 1440x900 @ 60Hz	, 75Hz						
	1600x1200 @ 60H: 1680x1050 @ 60H							
5	1920x1080 @ 60H	z						
Presets / user settings	Presets: 25; user settings: 25 On screen display with digital user controls (8 languages)							
On screen display Control features	Mode-switching (TI	O mode / standalone mon	itor mode, switches video /					
		sources) / Back button, Lef Selection button / Menu bu						
Tiny-in-One Power On	Pressing Alt + P or	keyboard or pressing Pov	ver button positioned on TIO					
Front ports	Two USB 3.0 or two	O and Tiny (only some Tin o USB 2.0 (when M73 or N	y support, see compatible list) 153 installed or USB 2.0					
•	connected via USE		lphone / microphone combo					
	jack (3.5mm) * The USB ports ar	e only available when a Ti	ny is istalled or a PC is					
Side ports	connected via USE Side ports offered I	supstream port by installed Tiny (optional)						
Rear ports	One DisplayPort 1.	2 port, one USB upstream	port, one power connector					
3-in-1 Cable			USB 3.0 [supports USB 3.0/ ig to Tiny installed (optional)					
Internal Speaker	1.5 watt x1	,, : , ::: :::::::::::::::::::::::::::						
Security			able lock (Kensington® lock ogether, more security features					
	offered by Tiny inst		ogothor, more eccurity reatures					
Mechanical	Dimensions	TIO 24 without stand	TIO 24 with stand					
	W x D x H (inch)	21.24 x 2.7 x 13.64	21.24 x 9.90 x 15.16 - 19.46					
	W x D x H (mm)	539.6 x 68.2 x 346.45	539.6 x 251.4 x 385.08 - 495.08					
	Weight (approximately)	12.25 lb /5.5	7 kg (with stand)					
		l						

Mounting features	Wall or desk mounting using the extend arm or third-party accessories meeting the VESA FPMPMI® (100mm mount)
Adjustable stand	Tilt: 35° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°
Power supply Power consumption	90 watts AC/DC adapter, 88% PSU, universal 16.7 watts typical, 35 watts maximum, <0.5 watts standby / suspend
Limited warranty ³	3-years, Customer Carry-In or Mail-In via Rapid Replacement Service
VESA-compliant ² Ergonomics Emission standards	VESA DDC2B/CI, VESA DPMS-compliant ISO 9241-307 FCC Class B
Environmental Windows certifications	TCO 7.0, TCO Edge 2.0, WEEE, RoHS, ENERGY STAR® 7.0 EPEAT™ Gold rating, ULE Gold, TUV, VOC Windows 7, Windows 8/8.1, and Windows 10 certified
Ship group	TIO 24 (Monitor), detachable stand, AC/DC power adapter, power cord, user's guide and driver CD, quick start and safety poster
Accessories	For compatible accessories, please go to http://www.lenovoquickpick.com

ThinkCentre Tiny-in-One 24 Compatible list								
Model	M900 Tiny, M700 Tiny, M600 Tiny,	M93/p Tiny,	Chromebox					
	M83 Tiny, M53 Tiny	M73 Tiny						
Turn on TIO and								
Tiny together via	All models	All models	Not support					
Alt + P on USB KB								
Turn on TIO and								
Tiny together via	All models	TIO models	All models					
TIO Power Button								













ThinkCentre Tiny-in-One (TIO) 24 Gen3

Model	Non-touch model: Touch model:	10QYPAR1++/10QYPA 10QXPAR1++/10QXPA	_ ′						
Form factor	Tiny-in-One, offers	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into							
Competible Tipy:		ean cabling and effortles							
Compatible Tiny:	Chromebox Tiny)U / IVI / UU / IVI 6 UU / IVI / I :	5 / M93/p* / M83 / M73* / M53 /						
		* Non-TIO models can't be turned on by pressing power button of TIO							
Panel	TFT-LCD, In-Plane	TFT-LCD, In-Plane Switching technology**, White LED backlight							
Vioughla imaga siza		vitching may refer to VA	, PLS, and IPS panels						
Viewable image size Max view area (W x H)	23.8" (604.7mm) di 21.06" x 12.32" / 53	35.0mm x 313.0mm							
Bezel Width `	Top / Side: 2mm, B								
Native resolution Multi-touch	1920x1080	nulti-touch, supports Wa	ke on Touch						
Aspect ratio	16:9	nulli-touch, supports wa	ike off fodelf						
Pixel pitch (mm)	0.2745mm								
Dot/Pixel per Inch Brightness	92.6 dpi 250 nits or cd/m² (t	vnical)							
Contrast ratio	1000:1 (typical)	ypicai)							
Pixel response time		er drive to 4ms, 6ms							
Color gamut Anti-reflective	72% Anti-glare								
Viewing angle at 10:1 CI		ontal, 178° (+/- 89°) ver	tical						
Preset resolutions	640x350 @ 70Hz								
	640x480 @ 60Hz,	67Hz, 72Hz, 75Hz							
	720x400 @ 70Hz 800x600 @ 60Hz,	72Hz. 75Hz							
	1024x768 @ 60Hz								
	1152x864 @75Hz 1280x800 @ 60Hz								
	1280x800 @ 60Hz 1280x1024 @ 60H								
	1366x768 @ 60Hz								
	1440x900 @ 60Hz								
	1600x1200 @ 60H; 1680x1050 @ 60H								
	1920x1080 @ 60H	z							
Presets / user settings	Presets: 25; user se								
On screen display Control features		with digital user controls	(8 languages) g button (TIO / monitor mode),						
Control leatures			Menu button, Power button						
	Bottom: Volume u	ip button, Volume down	button						
Tiny-in-One Power On	can turn on both TI	i keyboard or pressing F O and Tiny (only some	Power button positioned on TIO Finy support, see compatible list)						
Side ports (TIO)			or M53 installed or USB 2.0						
	connected via USB		n a Timuia istallad an a DO is						
		ort is only available whe via USB upstream port	n a Tiny is istalled or a PC is						
Side ports (Tiny)	Side ports offered by	by installed Tiny (optiona	al)						
Rear ports			n port, one power connector						
3-in-1 Cable			er, USB [supports USB 3.1 Gen1 g to Tiny installed (optional)						
Camera		dual microphone for VC							
Internal Speaker	2 watt x2								
Security	Security keyhole fo compatible), locks offered by Tiny inst	optional Tiny with TIO to	cable lock (Kensington® lock gether, more security features						
Mechanical	Dimensions	TIO without stand	TIO with stand						
	W x D x H (inch)	21.25 x 2.85 x 14.47	21.25 x 11.11 x 15.72 - 20.06						
	W x D x H (mm)	539.8 x 72.5 x 367.6	539.8 x 282.3 x 399.4 - 509.4						
	Weight (Approx.)	7.96 lb /3.61 kg	12.92 lb /5.86 kg						
	J (11 /		·						

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

ThinkCentre Tiny-in-One 24 Gen3 Compatible list								
Model	M910 / M710 / M900 / M700 / M93/p Tiny, Chromebox							
	M600 / M715 / M83 / M53 Tiny	M73 Tiny						
Turn on TIO and								
Tiny together via	All models	All models	Not support					
Alt + P on USB KB								
Turn on TIO and								
Tiny together via	All models	TIO models	All models					
TIO Power Button								













ThinkCentre Tiny-in-One (TIO) 27

Form factor	Tiny-in-One, offers a full All-In-One experience when optional Tiny slots into the back of TIO, clean cabling and effortless setup	Mechanical			TIO without	stand	TI	O with stand
Compatible Tiny:	ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny		Dimensions	614.0 x 72.00	V 410 1	6140 x 20	9.0 x 444.25 - 554.25	
Panel	TFT-LCD, In-Plane Switching technology**, White LED backlight **Notes: In-Plane Switching may refer to IPS, PLS, ADS, AHVA, and AA			(W x D x H mm / inch)	614.0 x 73.89 / 24.17 x 2.91			12.95 x 17.49 - 21.82
Viewable image size Max view area (W x H)	27" (685.8mm) diagonal 23.49" x 13.22" / 596.7mm x 335.7mm			Weight (Approx.)	4.91 kg / 10).82 lb	7.9	5 kg / 17.53 lb
Bezel Width Native resolution	Top / Side: 2mm, Bottom: 23.3mm 2560x1440	Mounting feature		Wall or desk moun meeting the VESA	FPMPMI® (100	extend ar 0mm mou	m or third-p unt)	party accessories
Multi-touch Aspect ratio Pixel pitch (mm) Dot/Pixel per Inch	None 16:9 0.2331mm 109 dpi	Adjustable stand T		Tilt: 35° back, -5° forward; \ lift: 4.3" (110mm); \ swivel: +/-45°; \ Pivot: clockwise -5° to 90°				
Brightness Contrast ratio Pixel response time	350 nits or cd/m² (typical) 1000:1 (typical) 14ms (default), over drive to 4ms, 6ms	Power supply Power consumpt	ion	170 watts adapter, 37 watts typical, 57			watts stand	by / suspend
Color gamut Anti-glare	99% sRGB Yes (25%)	Limited warranty		3-years, Product E Service (EMEA)	xchange Serv	ice (US a	and EMEA)	or Customer Carry-In
	R178° (+/- 89°) horizontal, 178° (+/- 89°) vertical	VESA-compliant Ergonomics		VESA DDC/CI. VE	SA DPMS-con	npliant		
Preset resolutions	640x480 @ 60Hz, 66Hz, 72Hz, 75Hz 720x400 @ 70Hz		rds	ISO 9241-307, TUV Eye Comfort certified FCC Class B 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				
800x600 @ 60Hz, 72Hz, 75Hz 1024x768 @ 60Hz, 70Hz, 75Hz		Windows certification	ations					
	1152x864 @75Hz 1280x768 @ 60Hz 1280x800 @ 60Hz 1280x1024 @ 60Hz, 72Hz, 75Hz 1366x768 @ 60Hz 1440x900 @ 60Hz, 75Hz 1600x1200 @ 60Hz, 70Hz, 75Hz		Ship group TIO 27 (Monitor), detachable stand, power adapter, power cord and driver CD					ower cord, reference
			Accessories For compatible accessories, please go to http://smartfind.lenovo.com					
			ThinkContro Tiny in One 27 Compatible Matrix					
	1680x1050 @ 60Hz	Model		ThinkCentre Tiny-in-One 27 Compatible Matrix P320 / P330 / M920(x) / M720 / M93/p Tiny, Chromebox				
	1920x1080 @ 60Hz 2560x1440 @ 60Hz	I Woodo!		//910(x) / М710 / М9	` '	1	3 Tiny	Omomosox
Presets / user settings	Presets: 27; user settings: 25			M600 / M715 / M83	3 / M53 Tiny			
On screen display Control features	On screen display with digital user controls (8 languages) Ftont: Exit button, Left / Mode-switching button (TIO / monitor mode), Right / Brightness button, Enter / Menu button, Power button	Turn on TIO a Tiny together Alt + P on US	via	All mode	ls	All r	models	Not support
Tiny-in-One Power On	Bottom: Volume up button, Volume down button Pressing Alt + P on keyboard or pressing Power button positioned on TIO can turn on both TIO and Tiny (only some support, see Compatible Matrix)	Turn on TIO a Tiny together	via	All mode	ls	TIO	models	All models
Side ports (TIO)	Two USB 3.1 Gen1 (downgrade to USB 2.0 when installing M73 or M53 or connecting USB 2.0 via USB upstream port), one headphone / microphone combo jack Notes: The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting	TIO Power Bu	utton					
Side ports (Tiny) Rear ports	USB upstream, DisplayPort(in), or HDMI(in) port Side ports offered by the installed Tiny (optional) One DisplayPort(in) port, one HDMI(in) port, one USB (Type-B) upstream							
3-in-1 Cable	port, one power connector Undetachable 3-in-1 cable, connecting to the power connecter, one USB, and one DisplayPort of the installed Tiny (optional)							
Camera	RGBIR camera with dual microphone, supports Window Hello and Facial Recognition, Think Shutter for Privacy Security, LED indicator							
Internal Speaker	2 watt x2							
Security	Security keyhole for attachment of optional cable lock (Kensington® lock compatible), locks optional Tiny with TIO together, more security features offered by Tiny installed (optional)							
								Lenovo, Feb 201

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

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

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

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

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

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

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

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U.S. EMEA

Summary of Changes

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

July 17, 2019 - Version 545

► Update EPEAT rating to Silver on most ThinkStation

June 26, 2019 - Version 544

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

May 15, 2019 - Version 542

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

March 13, 2019 - Version 539

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

February 20, 2019 - Version 538

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

August 22, 2018 - Version 529

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

August 1, 2018 - Version 528

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

June 20, 2018 - Version 526

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

May 30, 2018 - Version 525

► Added ThinkStation P720/P920 EMEA May 2018 models

April 18, 2018 - Version 523

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

March 28, 2018 - Version 522

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

March 7, 2018 - Version 521

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

January 30, 2018 - Version 519

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

December 20, 2017 - Version 517

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

September 29, 2017 - Version 513

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

September 12, 2017 - Version 512

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

August 23, 2017 - Version 511

▶ New ThinkStation P320 Tiny models announced on August 2017

August 2, 2017 - Version 510

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

June 21, 2017 - Version 508

► New ThinkStation P320 Tiny announced on June 2017

May 26, 2017 - Version 507

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

April 19, 2017 - Version 505

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

March 29, 2017 - Version 504

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

January 25, 2017 - Version 501

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

January 4, 2017 - Version 500

► Added ThinkStation P310 models announced on December 2016

December 14. 2016 - Version 499

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

November 23, 2016 - Version 498

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

October 12, 2016 - Version 496

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

August 3, 2016 - Version 493

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

July 13, 2016 - Version 492

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

June 22, 2016 - Version 491

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

June 2, 2016 - Version 490

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

May 19, 2016 - Version 489

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

April 27, 2016 - Version 488

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

April 6, 2016 - Version 487

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

March 23, 2016 - Version 486

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

February 24, 2016 - Version 485

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

December 9, 2015 - Version 482

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

November 18, 2015 - Version 481

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









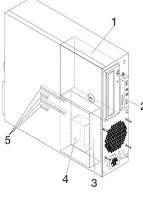




ThinkStation	P320	SFF	Platform	Specifications
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Components	Specification	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.0.00			
Chipset	Intel C236 Chipset						
Intel AMT	Intel Active Management Technology 11 on Xeon models, Intel Standard Manageability on other models						
	One Intel "Kabylak "Kaby Lake"						
Processor	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6 Xeon E3-1240 v6 Xeon E3-1240 v6 Xeon E3-1230 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7400 Core i3-7300 Core i3-7300 Core i3-7100	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 2C 2C	%3.8GHz/8 %3.7GHz/8 %3.7GHz/8 %3.3GHz/8 %3.3GHz/8 %3.6GHz/8 %3.5GHz/6 %3.4GHz/6 %34GHz/6M %4GHz/4M	MB/72W/D MB/73W/D MB/73W/D MB/73W/D MB/72W/D MB/73W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/51W/DD MB/51W/DD	DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 BR4-2400 BR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 BR4-2400 BR4-2400 BR4-2400		
	"Skylake"						
	Xeon E3-1245 v5 Xeon E3-1240 v5 Xeon E3-1230 v5 Xeon E3-1225 v5 Xeon E3-1220 v5 Core i7-6700 Core i5-6500 Core i3-6400 Core i3-6100	4C 4C 4C 4C 4C 4C	C/3.5GHz/8 C/3.4GHz/8 C/3.3GHz/8 C/3GHz/8M C/3.4GHz/8 C/3.2GHz/6 C/2.7GHz/6	MB/80W/D MB/80W/D MB/80W/D MB/80W/D B/80W/DD MB/65W/D MB/65W/D MB/65W/D MB/51W/D	DR4-2133 DR4-2133 DR4-2133 R4-2133 DR4-2133 DR4-2133 DR4-2133		
Memory DIMM slots	4 DIMM slots, 2-ch	annel	(integrate	d memor	y controller in processor)		
Memory type/capacity	Up to 64GB ECC/non-ECC (4 x 16GB), DDR4-2400. UDIMM. "Skylake" processor supports up to DDR4-2133. Core i7 and i5 processors cannot support ECC.						
Intel HD Graphics in processor	Integrated Intel HD P530 in Xeon E3-12x5 v5 processors, or Intel HD P630 in Xeon E3-12x5 v6 processors, or Intel HD 530 in Core i7, i5, or i3 6000 processors. or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connectors (2 DP, 1 VGA) on rear.						
		3.0 x16			adapters. Up to two NVIDIA Quinic adapters:	Jadro	
	Adapter	Cores	Memory	Power	Connector		
Diameter annuality	NVS 310	48	1GB	19.5W	2xDP		
Discrete graphics	NVS 315	48	1GB	19.5W	2xDVI-I SL/2xDP		
	NVS 510	192	2GB	33.4W	4xmini DP		
	Quadro P400 Quadro P600	256 384	2GB 2GB	30W 40W	3xminiDP 4xminiDP		
	Quadro P1000	640	4GB	47W	4xminiDP		
Onboard drive controller		6.0Gl	b/s conne	ctors for o	optical and disk drives plus one)	
Drive Bays	One external 5.25'	bay, c	ne intern	al 3.5" ba lisk drive	y (see right). bays + 1 x 2.5" disk drive bay -	+ two	
Supporting disk drives	3.5" SATA HDD (7.2K 2.5" SATA SSD (6Gbs M.2 NVMe SSD, via P adapter) 2 Cle 2	56GB Opal	/512GB/512 /512GB Opa	d/2TB hybrid GB Opal/1TB Opal/2TB opal al/1TB Opal, via PCIe 3.0 x4 adapter, ne Memory, PCIe 3.0 x2	up	
Max internal storage	10TB (2 x 4TB 3.5	" HDD:	s + 1 x 2T	B 2.5" SS	SD) plus two 1TB M.2 NVMe S	SD	
Media reader	· · · · · · · · · · · · · · · · · · ·				der on selected models		
Power supply	210 watts with vari	able s	peed fan,	autosens	ing,		
Onboard Ethernet					supports Wake-on-LAN		
HD Audio	Realtek ALC662 c		aniet, inte	I IZ I ƏLIVİ,	Supports ware-on-LAIN		
TPM	Standard, TCG 2.0		liant				
1 1 141	Jordinadia, 100 Z.C	Comp	пап				

Components	Specification
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	1 VGA and 2 DisplayPort (for Intel HD Graphics models only), two USB 2.0, four USB 3.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Mechanical	 Raven black color; metal case 4.02"W x 15.53"D x 13.31"H 102mm W x 394.5mm D x 338mm H 17.2 lb (7.9kg) max configuration 12.9-liter
Environmental certifications	GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ ENERGY STAR 6.1 qualified
Limited warranty	1 or 3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units.
ISV certifications	Please visit <u>www.thinkworkstations.com/isv-certifications/</u>



Drive Bays and PCIe Slots

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





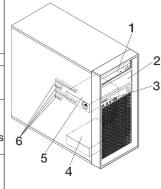






ThinkStation P320 Tower Platform Specifications								
Components	Specification							
Chipset	Intel C236 Chipset							
Intel AMT	Intel Active Management Technology 11 on Xeon models, Intel Standard Manageability on other models							
	One Intel "Kaby La "Kaby Lake"							
Processor	Xeon E3-1280 v6 Xeon E3-1275 v6 Xeon E3-1270 v6 Xeon E3-1240 v6 Xeon E3-1240 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Xeon E3-1220 v6 Core i7-7700K Core i7-7700 Core i5-7600 Core i5-7500 Core i5-7400 Core i3-7300 Core i3-7300 Core i3-7300	4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4	;/3.8GHz/8 ;/3.8GHz/8 ;/3.7GHz/8 ;/3.7GHz/8 ;/3.5GHz/8 ;/3.3GHz/8 ;/3.3GHz/8 ;/3.6GHz/8 ;/3.5GHz/6 ;/3.5GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/3.6GHz/6 ;/4.6Hz/6 ;/4.6Hz/4	MB/72W/D MB/73W/D MB/73W/D MB/73W/D MB/72W/D MB/72W/DD MB/91W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/65W/D MB/51W/DD	DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400 DR4-2400			
	"Skylake" Xeon E3-1245 v5 Xeon E3-1240 v5 Xeon E3-1230 v5 Xeon E3-1225 v5 Xeon E3-1220 v5 Core i7-6700 Core i5-6500 Core i3-6400 Core i3-6100	4C 4C 4C 4C 4C 4C 4C	i/3.5GHz/8 i/3.4GHz/8 i/3.3GHz/8 i/3.4GHz/8 i/3.4GHz/8 i/3.2GHz/6 i/2.7GHz/6	MB/80W/D MB/80W/D MB/80W/D MB/80W/D B/80W/DD MB/65W/D MB/65W/D MB/65W/D MB/51W/D	DR4-2133 DR4-2133 DR4-2133 R4-2133 DR4-2133 DR4-2133 DR4-2133			
Memory DIMM slots					y controller in processor)			
Memory type/capacity					R4-2400. UDIMM. "Skylal i7 and i5 processors can			
Intel HD Graphics in processor	in Xeon E3-12x5 ve processors. or Intel	Integrated Intel HD P530 in Xeon E3-12x5 v5 processors, or Intel HD P630 in Xeon E3-12x5 v6 processors, or Intel HD 530 in Core i7, i5, or i3 6000 processors. or Intel HD 630 in Core i7, i5, or i3 7000 processors. Works along with discrete graphics to support multi-display, enables three display connectors						
	Two PCI Express 3 Up to two Quadro I Or up to two Quads Supports the follow	.0 x16 P1000 ro P20 ring N	on 250 w 00, or up /IDIA gra	vatts mode to one Qu phics ada	els. uadro P4000 on 400 watt pters:	s models.		
	Adapter	Cores		Power	Connector			
	NVS 310 NVS 315	48	1GB 1GB	19.5W 19.5W	2xDP 2xDVI-I SL/2xDP	-		
Discrete graphics	NVS 510	192	2GB	33.4W	4xmini DP	-		
	NVS 810	1024	4GB	68W	8xmini DP	1		
	Quadro P400	256	2GB	30W	3xminiDP			
	Quadro P600	384	2GB	40W	4xminiDP			
	Quadro P1000	640	4GB	47W	4xminiDP			
	Quadro P2000	1024	5GB	75W	4xDP			
	Quadro P4000	1792	8GB	105W	4xDP			
Onboard drive controller	SATA connector for	option	nal eSATA	A. RAID 0,		is one		
Drive Bays		tical pl	us 4 x 3.5	5" disk dri	ve bays plus two M.2 NVI	Me SSD		
Supporting disk drives	3.5" SATA HDD (7.2K 6Gbs) 1TB/2TB/4TB/1TB hybrid/2TB hybrid 2.5" SATA SSD (6Gbs) 256GB Opal/512GB Opal/1TB Opal/2TB opal M.2 NVMe SSD, via PCle adapter 256GB Opal/512GB Opal/1TB Opal, PCle 3.0 x4, up to 2; or 16GB Intel Optane Memory, PCle 3.0 x2							
Max internal storage	16TB (4 x 4TB 3.5	' HDD:	s) plus 2T	B (2 x 1T	B) M.2 NVMe SSD			
Media reader	\				ider on selected models			
IVICUIA IEAUEI	Janie i Calu leadel.	Optioi	iai 23-111-	i caiu iea	ider on selected models			

Components	Specification
Power supply	One 250 watts with variable speed fan, autosensing, Climate Savers Computing Bronze, 80 PLUS Bronze qualified. Or one 400 watts with variable speed fan, autosensing, Climate Savers Computing Platinum, 80 PLUS Platinum qualified.
Onboard Ethernet	One onboard gigabit ethernet, Intel I219LM, supports Wake-on-LAN
HD Audio	Realtek ALC662 codec
TPM	Standard, TCG 2.0-compliant
Front ports	Two USB 3.0, microphone (3.5mm), headphone (3.5mm)
Rear ports	1 VGA and 2 DisplayPort (for Intel HD Graphics models only), two USB 2.0, four USB 3.0, one serial (9-pin), one ethernet (RJ-45), three analog audio ports (line-in, line-out, mic-in)
Mechanical	 Raven black color; metal case 6.89"W x 16.77"D x 14.8"H 175mm W x 426mm D x 376mm H 28.66 lb (13kg) max configuration 25-liter
Environmental certifications	GREENGUARD certified/RoHS-compliant/EPEAT Gold rating/ ENERGY STAR 6.1 qualified
Limited warranty	1 or 3-year limited onsite service with 9x5/NBD. Some parts are Customer Replaceable Units.
ISV certifications	Please visit <u>www.thinkworkstations.com/isv-certifications/</u>



Drive Bays and PCIe Slots

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









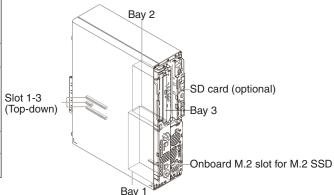


ThinkStation P330 SFF Platform Specifications

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

Components	Specification				
Media reader	Optional SD card reader on most models				
Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional PCIe ethernet adapters are available				
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, cable lock, Kensington lock, and pad lock				
Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed				
Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models				
Base warranty	US models comes with 3-year limited onsite service with 9x5/NBD. 1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs				
HD Audio	Intel HD Audio interface with Realtek ALC233 Codec				
Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x Combo jack				
Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor				
Optional rear ports	2x USB 3.1 Type-C. 1x COM. PS/2. 1x Parallel. 1x Thunderbolt. 1x IEEE1394. 1x HDMI. 1x Audio line-out Notes: HDMI needs Core, Pentium, or -G suffix Xeon processor				
Temperature	Operating: 41 °F to 104 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)				
Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)				
Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing				
Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified				
Power supply	Supports one 210W or 260W power supply. 210W is 100V - 240V, 85% PSU, Climate Savers Computing Bronze and 80 PLUS Bronze qualified. 260W is 100V - 240V, 92% PSU, Climate Savers Computing Platinum and 80 PLUS Platinum qualified				
ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/				

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











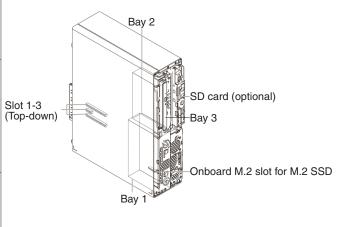


ThinkStation P330 SFF Gen 2 (30D1 and 30D2) Platform Specifications

THINKStation			(300	ı aıı	14 50	<i>D</i> 2) i	latioi	п орсс	incations
Components	Specification								
Form factor	8.4L mini-tow								
Dimensions	Height: 343.5 mm (13.5 in). Width: 92.5 mm (3.6 in). Depth: 305.6 mm (12 in)								
Weight	Maximum co								
Processor	Supports one of the following processor: Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 (260W PSU needed) Xeon E-2276G 6C/12T/3.8GHz/12MB/80W/DDR4-2666 Xeon E-2274G 4C/8T/4.0GHz/8MB/83W/DDR4-2666 Xeon E-2244G 6C/12T/3.6GHz/12MB/80W/DDR4-2666 Xeon E-2244G 4C/8T/3.8GHz/12MB/80W/DDR4-2666 Xeon E-2236 6C/12T/3.4GHz/12MB/80W/DDR4-2666 Xeon E-2234 4C/8T/3.4GHz/12MB/80W/DDR4-2666 Xeon E-2234 4C/8T/3.4GHz/12MB/80W/DDR4-2666 Xeon E-2224G 6C/6T/3.4GHz/12MB/80W/DDR4-2666 Xeon E-2224G 4C/4T/3.5GHz/8MB/71W/DDR4-2666 Xeon E-2224 4C/4T/3.4GHz/8MB/71W/DDR4-2666 Xeon E-2174G 4C/8T/3.8GHz/8MB/71W/DDR4-2666 Core i9-9900 8C/16T/3.1GHz/16MB/65W/DDR4-2666 Core i7-9700 8C/8T/3.0GHz/12MB/65W/DDR4-2666 Core i5-9600 6C/6T/3.1GHz/9MB/65W/DDR4-2666 Core i5-9500 6C/6T/3.0GHz/9MB/65W/DDR4-2666 Core i5-9400 6C/6T/2.9GHz/9MB/65W/DDR4-2666 Core i5-9400 6C/6T/3.0GHz/9MB/65W/DDR4-2666 Core i3-9300 4C/4T/3.7GHz/9MB/65W/DDR4-2400 Core i3-8100 4C/4T/3.7GHz/8MB/65W/DDR4-2400 Core i3-8100 4C/4T/3.6GHz/6MB/65W/DDR4-2400 Pentium Gold G5620 2C/4T/4.0GHz/4MB/54W/DDR4-2400								
Chipset	Intel C246 CI		020 207	,	, o.i, .		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Memory Sockets	4 DIMM socke	ets with 2 c	hannels						
Memory Types	8GB/16GB DI	DR4-2666	UDIMM E	ECC d	or 4GB/	3GB/16	GB DDR4	1-2666 UDIN	/IM non-ECC
Memory Capacity	64B with 4 x 1	6GB, both	UDIMM	ECC	or UDIN	/M nor	n-ECC		
Memory Protection	ECC on mode	ls with UD	IMM EC	C mer	meory				
Expansion slots Three PCle 3.0 slots as following: Slot 1 PCle 3.0 x16, low profile, links to CPU Slot 2 PCle 3.0 x1, low profile, links to PCH Slot 3 PCle 3.0 x16 (negotiable link width x4), low profile, links to P					nks to PCH				
Processor graphics Graphics 630 in Core i5 or i3 processors. Works along with discrete graphics to support multi-display, enables three rear display connectors (2 DP standard, 1 DP or HDMI optional)					ree rear				
	Up to two PC the following	le 3.0 x16 graphics a	S slots fo adapters	r disc :	rete gr	aphics	adapter ((Slot 1 and	3). Supports
Discrete graphics card	Adapter	Cores			Power		nnectors	Max qty	
caru	Quadro P400	256	2GB GE				miniDP	2	
	Quadro P620 Quadro P1000	512 640	2GB GE		40W 47W		miniDP miniDP	2	
			TOD GL	Ι	1				DAID
Storage Controller	Storage Cont Onboard Intel		Δ ΒΔΙΝ	Type Std		<u>тасе</u> 6Gb/s		<u>k Type</u> or SSD	0/1
Clorage Controller	Onboard Inte			Std		NVMe		Cle SSD	0/1
	Disk Type 3.5" SATA HD	Inter		PM		Offering			x Qty
	3.5" SATA HDD								
Storage Support	2.5" SATA SS			\		3/512G			2
	Optane Memo	ory PCIe N				32GB 3/512G			h HDD/SSD 3
				and					
	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)								
Clorage bay									
	Bay 3 M.2	3x M.2 SS			2 via P	Cle to	M.2 adapt	er)	

	Components	Specification					
-	M.2 slot for Wi-Fi and Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps					
\dashv	Media reader	Optional SD card reader on most models					
	Network interfaces	faces One onboard GbE port via integrated gigabit ethernet Intel i219LM, suppor Wake-on-LAN. Optional PCIe ethernet adapters are available					
	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 complian Optional chassis intrusion switch, cable lock, Kensington lock, and pad lock					
	Intel vPro	Supports Intel vPro on Xeon models. vPro also requires Wireless-AC 9560 if Wi-Fi is needed					
	Intel AMT	Intel Active Management Technology 12 on Xeon models, Intel Standard Manageability on other models					
	Base warranty	US models comes with 3-year limited onsite service with 9x5/NBD. 1 or 3-year limited onsite service with 9x5/NBD in EMEA or other GEOs					
	HD Audio	Intel HD Audio interface with Realtek ALC233 Codec					
	Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x Combo jack					
	Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor					
	Optional rear ports	Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0 Supports the following via PCIe adapter: 4x COM. 2x USB 3.1 Type-C. 2x USB 3.0. 1x Thunderbolt. Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor					
	Temperature	Operating: 41 °F to 104 °F (10 °C to 35 °C) Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C) Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)					
	Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)					
	Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing					
	Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified					
	Power supply	Supports one 210W or 260W power supply. 210W is 100V - 240V, 85% PSU, Climate Savers Computing Bronze and 80 PLUS Bronze qualified. 260W is 100V - 240V, 92% PSU, Climate Savers Computing Platinum and 80 PLUS Platinum qualified					
	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/					
	Note:						

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















ThinkStation P330 Tiny Platform Specifications

-									
Components	Specification								
Machine Type	MT 30CF for Transactional model and MT 30CE for Relationship model. For configuration of all 30CF EMEA and US models, please visit: http://psref.lenovo.com/Product/ThinkStation/ThinkStation_P330_Tiny								
Form factor	L. Optional VESA mount bracket kit, supports VESA 75mm and 100mm. Optional floor stand for vertical orientation. Optional tool-less chassis open. Optional dust filter Leicht: 179 mm (7.0 in) Width: 36.5 mm (1.437 in) Depth: 182.9 mm (7.2 in)								
Dimensions	eight: 179 mm (7.0 in). Width: 36.5 mm (1.437 in). Depth: 182.9 mm (7.2 in)								
Weight	flaximum configuration: 3.08 lb (1.4kg)								
Supported TIO monitors	Finy-in-One 23 (MT: 10DQ). Finy-in-One 22 (MT: 10LK). Finy-in-One 24 (MT: 10LL). Finy-in-One 22 Gen3 (MT: 10R1). Finy-in-One22 Gen3 Touch (MT: 10R0). Finy-in-One24 Gen3 (MT: 10QY). Finy-in-One24 Gen3 Touch (MT: 10QX). Finy-in-One24 Gen3 Touch (MT: 10QX).								
Recommended monitors	Lenovo recommends ThinkVision P series monitors for best display performance and productivity								
Processor	Up to one Intel Core family processor, i7, i5, or i3. Core i7 supports 65W or 35W, 6 cores, up to 3.2GHz, 12MB cache, DDR4-2666 memory speed. Core i5 supports 65W or 35W, 6 cores, up to 3.1GHz, 9MB cache, DDR4-2666 memory speed. Core i3 supports 65W, 62W, or 35W, 4 cores, up to 3.7GHz, 6MB or 8MB cache, DDR4-2400 memory speed.								
Chipset	Intel Q370 Chipset								
Memory	2 DIMM sockets. DDR4-2666. SoDIMM. Non-ECC								
Expansion slots	One PCIe slot via specific riser card: PCIe 3.0 x16 (negotiable link width x8) and low profile for discrete graphics card; PCIe 3.0 x4 and low profile for i350-T4 adapter and quad COM ports adapter								
Graphics	65W or 62W processor models supports processor graphics only. 35W processor models come with processor graphics plus a discrete graphics adapter								
Graphics - Processor graphics	' '								
Graphics - Discrete graphics card	One of the following discrete graphics cards on 35W processor models: rete Adapter Cores Memory Power Connectors Quadro P620 512 2GB GDDR5 40W 4x miniDP Quadro P1000 640 4GB GDDR5 47W 4x miniDP								
Storage controllers	Integrated Intol SATA AHCL controller in chipset 6Chas SATA one enheard SAT								
Internal storage bay	Up to one 2.5" HDD								
Disks	2.5" HDD supports up to 1TB, 6Gbps SATA, 7.2K or 5.4K								
M.2 slot for SSD	Two onboard M.2 slots for M.2 SSD, one for M.2 2280 SSD, one for M.2 2280 or 2242 SSD								
M.2 SSD	M.2 2280 SSD supports up to 1TB each, PCIe 3.0 x4, NVMe, optional Opal. M.2 2242 SSD supports up to 128GB, PCIe 3.0 x2, NVMe								
Optane memory	Up to one 16GB Optane memory per system. Optane memory must work with a 2.5" HDD								
M.2 slot for Wi-Fi and Bluetooth	One dedicated M.2 2230 slot for optional Wi-Fi card, supports one of the following Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5. up to 1.73Gbps.								
Wi-Fi antenna	Optional Tiny 2.4GHz/5GHz SMA antenna kit								
Optical	Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW. VESA mount is required								

	Specification						
Media reader	None. Using USB adapter						
Network interfaces	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports Wake-on-LAN. Optional Intel i350-T4 for 4x GbE ports, using PCIe slot						
Security leatures	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Chassis intrusion switch. Optional Kensington lock						
Tachaclass	Supports vPro on models with the following processors: Core i7-8700T, Core i7-8700, Core i5-8600T, Core i5-8600, Core i5-8500T, Core i5-8500. vPro also requires Wireless-AC 9560 if Wi-Fi is needed						
	Intel Active Management Technology 12 on vPro 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 I	Intel HD Audio interface with Realtek ALC233 Codec						
	1x USB 3.1 Gen 1 Type A (charging). 1x USB 3.1 Gen 1 Type-C. 1x Mic-in. 1x Combo jack						
	2x USB 3.1 Gen 2 Type A. 2x USB 3.1 Gen 1 Type-A. 1x RJ-45. 1x DP. 1x HDMI						
Optional rear ports - via punch out cable	Up to two optional rear ports via punch out cable. Port 1 supports one of the following: 1x USB 3.1 Gen 1 Type-C, also supports DP function. 1x COM. 1x VGA. 1x VB. 1x DP. 1x HDMI. Port 2 supports one COM						
Optional rear ports - 2 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)						
Ailitude	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)						
numuity	Operating: 20%~80%, non-condensing Storage (with package): 20%~90%, non-condensing						
	Certified						
certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified						
	Supports one 135W power adaper, 100V - 240V, 88% PSU						
ISV certifications	Please visit <u>www.thinkworkstations.com/isv-certifications/</u>						













ThinkStation P330 Tower Platform Specifications

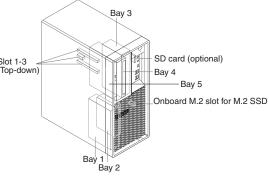
Components	Specification						C				
Machine Type	For configuration of	T 30C5 for Transactional model and MT 30C6 for Relationship model. r configuration of all 30C5 EMEA and US models, please visit: p://psref.lenovo.com/Product/ThinkStation/ThinkStation_P330_Tower L Tower eight: 376 mm (14.8 in). Width: 165 mm (6.5 in). Depth: 328 mm (12.9 in)									
Form factor	18L Tower]				
Dimensions	Height: 376 mm (14.	8 in).	Width: 165 mn	n (6.5 i	n). Depth: 328 mm (12.9 in)						
Weight	Maximum configurat	ion: 20	3.4 lb (10.6kg)				Ім				
Processor	12MB cache, up to I Or up to one 8th Inte at 3.7GHz, up to 12I	DDR4- el Core MB ca entium	·2666 memory e family proces che, up to DD i Gold G5400 v	speed ssor, i7 R4-266 via Spe	, i5, or i3, up to 95W, up to 6	6 cores	M ai M				
Chipset	Intel C246 Chipset	- 100 1	потпоту ороса	<u> </u>			1				
Memory	4 DIMM sockets. DD	DIMM sockets. DDR4-2666. UDIMM. ECC and non-ECC are supported, but lemory types cannot be intermixed									
Memory capacity	Up to 64GB with 4x	p to 64GB with 4x 16GB, both ECC and non-ECC									
Memory protection	ECC with ECC UDIN			rocess	ors cannot support ECC UE	MMIC	In				
	Slot 1 PCle 3.0 x16,	full he	eight, half leng	th, link	s to CPU		$\ _{B}$				
Expansion slots	Slot 2 PCle 3.0 x1, f										
	<u> </u>		<u> </u>		full height, half length, links	to PCH	H				
Graphics - Processor graphics	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD Graphics 630 in Core i7, i5, or i3 processors, or Intel UHD Graphics 610 in Pentium Gold G5400. Works along with discrete graphics to support multi-display, enables three display connectors (2x DP, 1x HDMI. HDMI is optional) on rear Up to two PCle 3.0 x16 slots for discrete graphics card (Slot 1 and 3). Supports the										
	following graphics adapters: Adapter Cores Memory Power Connectors Max qty										
	NVS 810 Cores Memory Power Connectors Max q										
	Quadro P400 256 2GB GDDR5 30W 3x miniDP 2										
	Quadro P620	512	2GB GDDR5		4x miniDP	2	Te				
	Quadro P1000 640 4GB GDDR5 47W 4x miniDP 2 Quadro P2000 1024 5GB GDDR5 75W 4x DP 2										
Graphics - Discrete graphics card	Quadro P4000 1792 8GB GDDR5 75W 4x DP 2 Quadro P4000 1792 8GB GDDR5 105W 4x DP 1										
grapriics card	Geforce GTX 1060	1280			DVI-D DL, HDMI, 3x DP	1	Шн				
	Geforce GTX 1070	1920			DVI-D DL, HDMI, 3x DP	1	_				
	Geforce GTX 1080 Radeon Pro WX 3100	512	4GB GDDR5X	180W	DVI-D DL, HDMI, 3x DP DP, 2x miniDP	1 2	E				
	Radeon Pro WX 4100			50W	4x miniDP	2	CE				
	Notes: 1. Quadro P4000, 2x Quadro P2000, Geforce GTX1060/1070/1080 needs 400W PSU. 2. Geforce GTX 1060/1070/1080 are dual-slot width. 3. Geforce GTX 1070/1070/1080 and Radeon Pro WX 3100/4100 are SBO. 1.										
Storage controllers	Four onboard SATA	ports	for max 4 SAT	A HDD			No 1. 1 2. 1				
	HDD plus 1x 2.5" SS	SD, or	4x 2.5" SSD	one slir	n optical bay, supports up to	3x 3.5"					
	Bay 1 Primary disk	bay, 3	.5" or 2.5"								
	Bay 2 2.5" SATA bay, cannot be available when 2nd Quadro P2000 is used										
	Bay 3 Secondary disk bay, 3.5" or 2.5"										
Internal storage	Bay 4 5 25" Flex hav, supports one of the following:										
bay					hunderbolt/IEEE1394		(To				
	using SATA	4 con	nector as eSA	TA mo		closure,					
			or 2.5",via 5.2								
				M.2 en	closure, also occupies slot 1	or 3					
	Bay 5 9mm Slim O										
	2.5" HDD supports up to 4TB each, 6Gbps SATA, 7.2K 2.5" SSD supports up to 1TB each, 6Gbps SATA										

	Components	Specification							
		Up to 3x M.2 SSD with one dedicated onboard M.2 slot plus two PCle to M.2							
		adapters. PCIe to M.2 adapter uses slot 1 or 3.							
-	M.2 slot for SSD	Supports RAID 0/1 with PCH, When used as RAID, M.2 SSD should be installed in onboard M.2 slot and slot 3.							
4		Up to one Optane memory per system; Optane memory must work with a							
╛		HDD or SSD; Optane memory cannot supported on Pentium G5400 models							
	M.2 SSD	M.2 SSD supports up to 1TB each, PCle 3.0 x4, NVMe, Opal.							
		Optane memory supports 32GB, PCle 3.0 x2, NVMe, 3D Xpoint							
	M.2 slot for Wi-Fi and Bluetooth	One dedicated onboard M.2 slot for optional Intel Wireless-AC 9560, 2x2, 2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps							
	Media reader	Optional SD card reader on most models							
	iviedia readei	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports							
_	Network interfaces	Nake-on-LAN. Optional PCIe ethernet adapters are available							
-	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant. Optional chassis intrusion switch, cable lock, Kensington lock, and pad lock							
\dashv	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							
7	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							
١	Rear ports	2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP. 1x Audio line-out							
		Notes: DP needs Core, Pentium, or -G suffix Xeon processor							
_	Optional front ports	2x Thunderbolt (USB Type-C), one of two ports supports video-out.							
	(on flex module)								
,	Optional rear ports	2x USB 3.1 Type-C. 1x COM. PS/2. 1x Parallel. 1x Thunderbolt. 1x IEEE1394. 1x HDMI. Notes: HDMI needs Core, Pentium, or -G suffix Xeon processor							
4		Operating: 41 °F to 104 °F (10 °C to 35 °C)							
4	Temperature	Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)							
╢		Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)							
	Altitude	Operating: -15.2 m (-50 ft) to 3048 m (10 000 ft). Storage: -15.2 m (-50 ft) to 10, 668 m (35 000 ft)							
	Humidity	Operating: 30%~90%, non-condensing Storage (with package): 20%~90%, non-condensing							
	Environmental certification	RoHS-compliant. GREENGUARD. EPEAT Silver rating and ENERGY STAR 7 qualified							
	Power supply	Supports one 250W or 400W power supply, 100V - 240V, 92% PSU. Climate Savers Computing Platinum and 80 PLUS Platinum qualified. 400W PSU supports one 6+2-pin aux power connector.							
	ISV certifications	Please visit www.thinkworkstations.com/isv-certifications/							
	Note:	re-actual data transfer chood montioned on this page may be lower than theoretical chood							

Note:

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

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















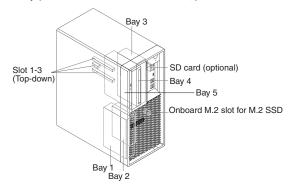
ThinkStation P330 Tower Gen 2 (30CY and 30D0) Platform Specifications - I of II

Components	Specification	Components	Specification					
Form factor	18L Tower		Storage Controller Type Interface Disk Type RAID					
Dimensions	Height: 376 mm (14.8 in). Width: 165 mm (6.5 in). Depth: 328 mm (12.9 in)	Storage Controller	Onboard Intel RST SATA RAID Std SATA 6Gb/s HDD or SSD 0/1/10/5					
Weight	Maximum configuration: 28.22 lb (12.8kg)	-	Onboard Intel RST PCIe RAID Std PCIe NVMe M.2 PCIe SSD 0/1					
vvoigni	Supports one of the following processors:	-	Disk Type Interface RPM Offering Max Qty					
			3.5" SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB 3					
	Xeon E-2288G 8C/16T/3.7GHz/16MB/95W/DDR4-2666 400W PSU needed		2.5" SATA HDD SATA 6Gb/s 7.2K 500GB FIPS 4					
	Xeon E-2286G 6C/12T/4.0GHz/12MB/95W/DDR4-2666 400W PSU needed Xeon E-2278G 8C/16T/3.4GHz/16MB/80W/DDR4-2666 400W PSU needed	Storage Support	2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB 4					
	Xeon E-2276G 6C/12T/3.8GHz/12MB/80W/DDR4-2666 8C/12T/3.8GHz/12MB/80W/DDR4-2666		Optane Memory PCIe NVMe 32GB 1,					
	Xeon E-2274G 4C/8T/4.0GHz/8MB/83W/DDR4-2666		used with HDD/55D					
	Xeon E-2246G 6C/12T/3.6GHz/12MB/80W/DDR4-2666		M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB 3					
	Xeon E-2244G 4C/8T/3.8GHz/8MB/71W/DDR4-2666		Up to five bays with four disk bays plus one slim optical bay, supports up to $3x$ 3.5" HDD plus $1x$ 2.5" SSD, or $4x$ 2.5" HDD/SSD					
	Xeon E-2236 6C/12T/3.4GHz/12MB/80W/DDR4-2666		3.5" HDD plus 1x 2.5" SSD, or 4x 2.5" HDD/SSD					
	Xeon E-2234 4C/8T/3.6GHz/8MB/71W/DDR4-2666		Bay 1 Primary disk bay, 3.5" or 2.5"					
	Xeon E-2226G 6C/6T/3.4GHz/12MB/80W/DDR4-2666		Bay 2 2.5" SATA bay, cannot be available when 2nd Quadro P2000 is used					
Processor	Xeon E-2224G		Bay 3 Secondary disk bay, 3.5" or 2.5"					
	Xeon E-2224 4C/4T/3.4GHz/8MB/71W/DDR4-2666	04	Bay 4 5.25" Flex bay, supports one of the following:					
	Xeon E-2186G 6C/12T/3.8GHz/12MB/95W/DDR4-2666 400W PSU needed Xeon E-2174G 4C/8T/3.8GHz/8MB/71W/DDR4-2666	Storage Bays	Flex module for optional front eSATA/Thunderbolt/IEEE1394					
	Pentium Gold G5620 2C/4T/4.0GHz/4MB/54W/DDR4-2400		3rd disk bay, 3.5" or 2.5", removable, via Front Access Storage Enclosure, using SATA 4 connector as eSATA mode					
	Core i9-9900 8C/16T/3.1GHz/16MB/65W/DDR4-2666							
	Core i7-9700K 8C/8T/3.6GHz/12MB/95W/DDR4-2666 400W PSU needed		• 3rd disk bay, 3.5" or 2.5", via 5.25" to 3.5" HDD Kit					
	Core i7-9700 8C/8T/3.0GHz/12MB/65W/DDR4-2666		Bay 5 9mm Slim ODD bay					
	Core i7-8700 6C/12T/3.2GHz/12MB/65W/DDR4-2666		M.2 3x M.2 SSD (1 onboard, 2 via PCle to M.2 adapter)					
	Core i5-9600K 6C/6T/3.7GHz/9MB/95W/DDR4-2666 400W PSU needed	Media reader	Optional SD card reader on most models					
	Core i5-9600 6C/6T/3.1GHz/9MB/65W/DDR4-2666	Network	One onboard GbE port via integrated gigabit ethernet Intel i219LM, supports					
	Core i5-9500 6C/6T/3.0GHz/9MB/65W/DDR4-2666	interfaces	Wake-on-LAN. Optional PCIe ethernet adapters are available					
	Core i5-9400 6C/6T/2.9GHz/9MB/65W/DDR4-2666		One dedicated appeared M.O. alet for antional Intel Wireless AC 0560, 0v0					
	Core i5-8500 6C/6T/3.0GHz/9MB/65W/DDR4-2666 Core i3-9300 4C/4T/3.7GHz/8MB/62W/DDR4-2400	WLAN + Bluetooth	2.4GHz/5GHz (160MHz channels), 802.11ac, Bluetooth 5, up to 1.73Gbps					
	Core i3-9100 4C/4T/3.6GHz/6MB/65W/DDR4-2400		Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant.					
	Core i3-8300 4C/4T/3.7GHz/8MB/62W/DDR4-2400	Security features	S Optional chassis intrusion switch, e-loack, cable lock, Kensington lock, and pad lock					
	Core i3-8100 4C/4T/3.6GHz/6MB/65W/DDR4-2400							
Chipset	Intel C246 Chipset	Intel vPro	Supports Intel vPro on Xeon models.					
Memory Sockets	4 DIMM sockets with 2 channels	1	vPro also requires Wireless-AC 9560 if Wi-Fi is needed					
Memory Types	8GB/16GB DDR4-2666 UDIMM ECC or 4GB/8GB/16GB DDR4-2666 UDIMM non-ECC	Intel AMT	Intel Active Management Technology 12 on Xeon models,					
Memory Capacity	64B with 4 x 16GB, both UDIMM ECC or UDIMM non-ECC	1	Intel Standard Manageability on other models					
Memory Protection	ECC on models with UDIMM ECC memeory	Base warranty	US models comes with 3-year limited onsite service with 9x5/NBD.					
Wichiory 1 Totoction	Three PCIe 3.0 slots as following:	1	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					
Expansion slots	Slot 1 PCIe 3.0 x16, full height, half length, links to CPU	Front ports	2x USB 3.1 Gen 1 Type A. 2x USB 3.1 Gen 2 Type A. 1x USB 3.1 Gen 1					
	Slot 2 PCIe 3.0 x1, full height, full length, links to PCH	-	Type-C. 1x Mic-in. 1x Combo jack 2x USB 3.1 Gen 1 Type A. 2x USB 2.0 Type-A. 1x RJ-45. 1x COM. 2x DP.					
	Slot 3 PCIe 3.0 x16 (negotiable link width x4), full height, half length, links to PCH	Rear ports	1x Audio line-out					
	Integrated Intel UHD Graphics P630 in -G suffix Xeon processors, or Intel UHD		1x Audio line-out Notes: DP needs Core, Pentium, or -G suffix Xeon processor					
Processor graphics	Graphics 630 in Core i7, i5, i3, or Pentium processors.	Optional front	2x Thunderbolt (USB Type-C), one of two ports supports video-out.					
. recessor grapmet	Works along with discrete graphics to support multi-display, enables three rear	ports (on flex	1x eSATA. 1x IEEE1394					
	display connectors (2 DP standard, 1 DP or HDMI optional)	module)						
	Up to two PCIe 3.0 x16 slots for discrete graphics card (Slot 1 and 3). Supports the following graphics adapters:		Supports the following via cable: 1x COM. 1x Parallel. 2x PS/2. 1x DP or 1x HDMI. 2x USB 2.0					
		Optional rear	Supports the following via PCIe adapter:					
	Graphics Memory Power Connector Max Qty	ports	4x COM. 2x USB 3.1 Type-C. 2x USB 3.0. 1x Thunderbolt.					
	Quadro P400 2GB GDDR5 30W 3x miniDP 2 Quadro P620 2GB GDDR5 40W 4x miniDP 2		Notes: DP or HDMI needs Core, Pentium, or -G suffix Xeon processor					
Discrete Graphics	Quadro P1000 4GB GDDR5 50W 4x miniDP 2		Operating: 41 °F to 104 °F (10 °C to 35 °C)					
Offering	Quadro P2000 5GB GDDR5 75W 4x DP 2	Temperature	Non operating (no package): 14 °F to 140 °F (-10 °C to 60 °C)					
	Quadro P2200		Non operating (with package): -40 °F to 140 °F (-40 °C to 60 °C)					
	Quadro P5000 16GB GDDR5X 180W DVI-D DL + 4x DP 1							
	Quadro RTX 4000 8GB GDDR6 160W 3x DP, 1x VirtualLink 1							
	Note: 2x Quadro P2000, Quadro P5000, or Quadro RTX 4000 needs 400W PSU							
-								

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

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

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





ThinkStation P520 Platform Specifications

Form factor 33l. Tower	Dimensions 168 Weight Ma Weight Ma Up Processor Family Processor Sockets 1x Chipset Inte Memory Sockets 8D Memory Types DD Memory Capacity 256 Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	5mm/6.5" W x 4 aximum configure to one 140W li Up to 18 cores Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 ell C422 Chipsee DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 6 (PCH) F ot 8 H0 uadro P400 uadro P600 uadro P600 uadro P1000 uadro P1000 uadro P1000 uadro P1000 uadro P2000	ration: 5. ntel Xeo at 2.3 G with 4 co 3 cache 66 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCIE 3.0 PCIE 3.0	2.91 lb (24n W family Hz hz family Hz hz family Hz famil	eight, fi height, eight, height, li leight, height, height, height, height, height, height he	sor: ull length, full lengtl alf length full lengtl n, 25W alf length Con 8xm	25W, op n, 75W, o l, 25W, o n, 75W, o l, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Meight	Weight Ma Up Processor Family Processor Sockets 1x Chipset Inte Memory Sockets 8D Memory Types DD Memory Capacity 25f Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	aximum configure to one 140W live to one 140W live to 18 cores. Up to 4.0 GHz vup to 4.0 GHz vup to 24.75 MB up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets was DR4-2666 RDIM 6GB with 8 x 32 CC ot 11 (CPU) Fot 2 (CPU) Fot 5 (CPU) Fot 6 (PCH) Fot 6 (PCH) Fot 6 (PCH) Fot 6 (PCH) Fot 7 (PCH) Fot 7 (PCH) Fot 7 (PCH) Fot 8 (PCH) Fot 8 (PCH) Fot 9 (PCH)	ration: 5. ntel Xeo at 2.3 G with 4 co 3 cache 66 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCIE 3.0 PCIE 3.0	2.91 lb (24n W family Hz hz family Hz hz family Hz famil	eight, fi height, eight, height, li leight, height, height, height, height, height, height he	sor: ull length, full lengtl alf length full lengtl n, 25W alf length Con 8xm	25W, op n, 75W, o l, 25W, o n, 75W, o l, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Up to one 140W Intel Xeon W Iamily processor:	Processor Family Processor Sockets Interpretation Processor Sockets Chipset Interpretation Memory Sockets Memory Types Memory Capacity Slo Slo Slo Slo Slo Slo Slo Sl	or to one 140W li Up to 18 cores. Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC or to 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P600 uadro P600 uadro P600 uadro P1000 uadro P1000 uadro P1000	ntel Xeo at 2.3 G with 4 cc 3 cache 66 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0	annels IMMs O x8, full h O x16, full h O x4, full h	eight, fi height, eight, height, ll length eight, h	ull length, full length alf length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Processor Family Up to 4.0 GHz with 4 cores	Processor Family Processor Sockets Ix Chipset Interpretation Memory Sockets Memory Types Memory Capacity Sic Sic Sic Sic Sic Sic Sic Sic Sic Si	Up to 18 cores Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P620 uadro P1000 uadro P1000 uadro P2000	at 2.3 G with 4 cc 3 cache 666 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0 PCIE 3	Annels IMMs O x8, full h O x16, full h O x4, full h O x4, full h O x4, full h O x4, full h D x4, full h O x4, full h O x4, full h O x4, full h	eight, fi height, eight, h height, ll Il length eight, h Power 68W 30W	ull length, full length alf length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Processor Family Up to 4.0 GHz with 4 cores Up to 24.75 MB cache Up to DDR4-2666 memory speed Up to DDR4-2666 RDIMM Up to DDR4-266	Processor Family Processor Sockets Ix Chipset Interpretation Memory Sockets Memory Types Memory Protection Expansion slots Sic Sic Sic Sic Sic Sic Sic Sic Sic Si	Up to 4.0 GHz v Up to 24.75 MB Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC tot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 7 (PCH) F ot 8 10 uadro P400 uadro P620 uadro P1000 uadro P1000 uadro P2000	with 4 cc 3 cache 66 mem et with 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0	annels IMMs O x8, full h O x16, full h O x4, full h O x4, full h Height, fu O x4, full h Bemory B DDR3 B GDDR5 B GDDR5	eight, fi height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Processor Sockets	Processor Sockets 1x Chipset Interpretation Interpr	Up to DDR4-26 FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	et vith 4 ch MM PCIB 3.0	annels IMMs 0 x8, full h 0 x16, full h 0 x16, full h 0 x16, full h 1 x16, full h 1 x16, full h 1 x16, full h 2 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h	eight, fi height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Processor Sockets	Processor Sockets 1x Chipset Inte Memory Sockets 8 E Memory Types DD Memory Capacity 256 Memory Protection EC Expansion slots Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	FCLGA2066 el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P620 uadro P620 uadro P1000 uadro P2000	ot vith 4 ch with 4 ch MM 2GB RD PCIe 3.0 PCIE 3.0 PCIE 3	annels IMMs 0 x8, full h 0 x16, full h 0 x16, full h 0 x16, full h 1 x16, full h 1 x16, full h 1 x16, full h 2 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h 3 x4, full h	eight, fi height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Chipset	Chipset Interest Memory Sockets 8 E Memory Types DD Memory Capacity 256 Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	el C422 Chipse DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 6 (PCH) F ot 8810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	vith 4 ch	IMMs) x8, full h) x16, full h) x4, full h) x16, full h height, fu) x4, full h lemory B DDR3 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Memory Sockets S DIMM sockets with 4 channels	Memory Sockets 8 E Memory Types DD Memory Capacity 256 Memory Protection EC Slo Slo Slo Slo Slo Slo Slo Slo Slo Slo	DIMM sockets w DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 78 ouadro P400 uadro P600 uadro P600 uadro P1000 uadro P2000	vith 4 ch	IMMs) x8, full h) x16, full h) x4, full h) x16, full h height, fu) x4, full h lemory B DDR3 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Memory Types DDR4-2666 RDIMM Memory Capacity 2568 with 8 x 32GB RDIMMs ECC Slot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x16, full height, half length, 25W, open ended Slot 4 (CPU) PCIe 3.0 x16, full height, half length, 25W, open ended Slot 5 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended Rother 1	Memory Types DD Memory Capacity 256 Memory Protection EC Slc	DR4-2666 RDIM 6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 6 (PCH) F ot 7 (PCH) F ot 7 (PCH) F ot 8 (PCH) F ot 8 (PCH) F ot 9 (PCH)	PCIe 3.0 PCIE 3.0 PCI	IMMs) x8, full h) x16, full h) x4, full h) x16, full h height, fu) x4, full h lemory B DDR3 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Memory Capacity Capacity ECC	Memory Capacity 256 Memory Protection EC Slc	6GB with 8 x 32 CC ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 5 F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIE 3.0 PCI	0 x8, full h 0 x16, full h 0 x4, full h 0 x16, full height, full h 1 x4, full h 1 lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Memory Protection ECC Slot 1 (CPU) PCle 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCle 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCle 3.0 x4, full height, full length, 25W, open ended Slot 4 (CPU) PCle 3.0 x4, full height, full length, 75W, double-width Slot 5 PCl, full height, full length, 75W, double-width Slot 5 PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, 25W, open ended Rephrica PCl, full height, full length, full leng	Memory Protection EC Slc	ot 1 (CPU) Fot 2 (CPU) Fot 3 (PCH) Fot 5 Fot 6 (PCH) Fraphics VS 810 uadro P600 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIE 3.0 PCI	0 x8, full h 0 x16, full h 0 x4, full h 0 x16, full height, full h 1 x4, full h 1 lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Stot 1 (CPU) PCIe 3.0 x8, full height, full length, 25W, open ended Slot 2 (CPU) PCIe 3.0 x16, full height, full length, 75W, double-width Slot 3 (PCH) PCIe 3.0 x16, full height, full length, 75W, open ended Slot 4 (CPU) PCIe 3.0 x46, full height, full length, 75W, double-width Slot 5 PCI, full height, full length, 75W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 75W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 75W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 75W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 75W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 25W, open ended Slot 6 (PCH) PCIe 3.0 x46, full height, full length, 75W, double-width Slot 7 (PCI) Slot 7 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 8 (PCI) Slot 9	Expansion slots Slot Slot Slot Slot Slot Slot Slot Slot	ot 1 (CPU) F ot 2 (CPU) F ot 3 (PCH) F ot 4 (CPU) F ot 5 F ot 6 (PCH) F raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 4G 2GE 2GE 4GE) x16, full) x4, full h) x16, full height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Solicity Poles 3.0 x16, full height, full length, 75W, double-width	Expansion slots Slot Slot Slot Slot Slot Slot Slot Slot	ot 2 (CPU) Fot 3 (PCH) Fot 4 (CPU) Fot 5 Fot 6 (PCH) Fraphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0 PCIe 3.0 PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 4G 2GE 2GE 4GE) x16, full) x4, full h) x16, full height, fu) x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	height, eight, h height, Il length eight, h Power 68W 30W	full length alf length full length n, 25W alf length Con 8xm	n, 75W, c i, 25W, o n, 75W, c i, 25W, o nector ini DP	double-width pen ended double-width pen ended			
Expansion slots	Expansion slots Slot Slot Slot Slot Slot Slot Slot Slot	ot 3 (PCH) Fot 4 (CPU) Fot 5 Fot 6 (PCH) Fraphics VS 810 Ladro P600 Ladro P620 Ladro P1000 Ladro P2000 Ladro P2000	PCIe 3.0 PCIe 3.0 PCI, full PCIe 3.0 M 4G 2GE 2GE 4GE) x4, full h) x16, full height, fu) x4, full h lemory B DDR3 B GDDR5 B GDDR5	eight, h height, Il length eight, h Power 68W 30W	ialf length full length n, 25W ialf length Con 8xm	, 25W, o n, 75W, o n, 25W, o nector ini DP	pen ended double-width pen ended			
Storage Support Storage Bays Storage Bays Storage Bays Storage Bays Storage Support Stor	Expansion siots Sic Sic Sic Sic Sic Sic Sic Sic Sic Sic	ot 4 (CPU) Fot 5 Fot 6 (PCH) Fraphics VS 810 uadro P600 uadro P620 uadro P1000 uadro P2000 uadro P2000	PCIe 3.0 PCI, full PCIe 3.0 V 4G 2GE 2GE 4GE	0 x16, full height, fu 0 x4, full h lemory B DDR3 B GDDR5 B GDDR5	height, II lengtheight, height, full lengtl n, 25W alf length Con 8xm	n, 75W, o , 25W, o nector ini DP	double-width				
Slot 5 PCI, full height, full length, 25W Slot 6 (PCH) PCIe 3.0 x4, full height, half length, 25W, open ended	Sic Sic Sic Sic Sic Sic Sic Sic Sic Sic	ot 5 Frot 6 (PCH) Fraphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCI, full PCIe 3.0 W 4G 2GE 2GE 2GE 4GE	height, fu 0 x4, full h lemory B DDR3 3 GDDR5 3 GDDR5	ll length eight, h Power 68W 30W	n, 25W alf length Coni 8xm	, 25W, o nector ini DP	pen ended			
Slot 6 (PCH) PCle 3.0 x4, full height, half length, 25W, open ended Graphics Memory Power Connector SLI / NVlink Max Qty NVS 810	Slo Gr NV Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu	ot 6 (PCH) Fraphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	PCIe 3.0	x4, full had been been been been been been been bee	Power 68W 30W	alf length Con 8xm	nector ini DP				
Graphics Memory Power Connector SLI / NVIink Max Qty NVS 810	Storage Controller Storage Controller Discrete Graphics Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu	raphics VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	2GE 2GE 2GE 4GE	lemory B DDR3 B GDDR5 B GDDR5	Power 68W 30W	Coni 8xm	nector ini DP				
NVS 810	Discrete Graphics Offering Discrete Graphics Offering Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu	VS 810 uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	4G 2GE 2GE 2GE 4GE	B DDR3 B GDDR5 B GDDR5	68W 30W	8xm	ini DP	SLI / NVlink			
Quadro P400	Discrete Graphics Offering Discrete Graphics Offering Qu Qu Qu Qu Qu Qu Qu NV NV NV NV Dis 3.5 2.5	uadro P400 uadro P600 uadro P620 uadro P1000 uadro P2000	2GE 2GE 2GE 4GE	GDDR5 GDDR5	30W				2		
Quadro P600 2GB GDDR5 45W 4xminiDP 2 Quadro P620 2GB GDDR5 40W 4xminiDP 2 Quadro P620 2GB GDDR5 50W 4xminiDP 2 Quadro P1000 4GB GDDR5 50W 4xminiDP 2 Quadro P2000 5GB GDDR5 75W 4xDP 2 Quadro P2000 5GB GDDR5 75W 4xDP 2 Quadro P2000 6GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5 120W 4xDP 2 Quadro P5000 16GB GDDR5 120W 4xDP 5U 2 Quadro P5000 24GB GDDR5 250W DVI-D DL+4xDP 5U 2 Quadro P6000 24GB GDDR5 255W 4xDP, 1xVirtualLink 2 Quadro RTX 4000 8GB GDDR6 160W 3xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GRTX 600	Discrete Graphics Offering Discrete Graphics Offering Qu Qu Qu Qu Qu Qu Qu NV NV NV Dis 3.5 2.5	uadro P600 uadro P620 uadro P1000 uadro P2000	2GE 2GE 4GE	GDDR5		SXIII			0		
Quadro P620	Discrete Graphics Offering Discrete Graphics Out Out Out Out Out Out Out Out Out Out	uadro P620 uadro P1000 uadro P2000	2GE 4GE		7000	/lym					
Discrete Graphics	Discrete Graphics Offering Discrete Graphics Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu Qu	uadro P1000 uadro P2000	4GE		40W						
Discrete Graphics	Discrete Graphics Offering OL OL OL OL OL OL OL OL OL OL OL OL OL	uadro P2000	5GE								
Offering	Offering Qu Qu Qu Qu Qu Qu Str Orr 94 NV NV NV Dis 3.5 2.5	uadro P4000	306	GDDR5							
Quadro P6000 24GB GDDR5X 250W DVI-D DL+4xDP 1 Quadro RTX 4000 8GB GDDR6 160W 3xDP, 1xVirtualLink 2 Quadro RTX 5000 16GB GDDR6 265W 4xDP, 1xVirtualLink 1 Quadro RTX 6000 24GB GDDR6 265W 4xDP, 1xVirtualLink 1 Quadro RTX 8000 44GB GDDR6 295W 4xDP, 1xVirtualLink 1 Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2 Quadro GV100 32GB HBM2 250W 4xDP 1 1	Storage Controller Divining the state of th										
Quadro RTX 4000	Storage Controller 94 NV NV NV Dis 3.5										
Quadro RTX 5000	Storage Controller 94 NV NV Dis 3.5 2.5										
Quadro RTX 6000	Storage Controller 94 NV NV NV Dis 3.5 2.5										
Quadro RTX 8000	Storage Controller Storage Controller Discourse Str. Str. Str. Str. Str. Str. Str. Str.										
Quadro GP100	Storage Controller Storage Controller Dis 3.5										
Storage Controller	Storage Controller Storage Controller Dis 3.5 2.5	Quadro GP100 16GB HBM2 235W 1xDVI-D DL, 4xDP NVLink 2									
Storage Controller	Storage Controller 94 NV NV NV Dis 3.5										
Storage Controller	Storage Controller 94 NV NV NV Dis 3.5										
Storage Controller	Storage Controller 94 NV NV Dis 3.5 2.5	Onboard Intel RSTe Std SATA 6Gb/s 0/1/10/5									
NVMe Basic	NV NV NV Dis 3.5								24 0		
NVMe Premium	Dis 3.5 2.5							6 4GB DDF	14, SuperCap		
NVMe for Intel SSD Opt PCle NVMe 0/1/10/5	Dis 3.5							5			
Disk Type	Dis 3.5 2.5										
Storage Support SATA HDD SATA 6Gb/s 7.2K 1TB/2TB/4TB/6TB 6	3.5					Offoring		May	Otv		
Storage Support 2.5" SATA HDD SATA 6Gb/s 7.2K 500GB/500GB FIPS 6 2.5" SATA SSD SATA 6Gb/s 256GB/512GB/1TB/2TB 6 M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 9 PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type	2.5				1TB/		6TB				
Storage Support 2.5" SAIA SSD SAIA 6Gb/s 256GB/512GB/11B/21B 6 M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 9 PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type	Storage Support 2.5						-		2		
PCIe AIC SSD PCIe NVMe 480GB 2 (1 when quad M.2 adapter used) Bay Type									<u> </u>		
Bay Type Maximum Drives Qty M.2 slot 9x M.2 ssD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following:	M.	.2 PCle SSD P	Cle NV	Me							
Bay Type Maximum Drives Qty M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1 x flex module for the following options: Tray 1: 9.0mm optical	PC	Cle AIC SSD P	Cle NV	Me		480GB					
M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1 x flex module for the following options: Tray 1: 9.0mm optical								eu)			
2 flex bays. Supports the following: 2 x half-height optical drives 2 x 5.25" 9.0mm optical drives 1 x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1 x flex module for the following options: Tray 1: 9.0mm optical											
2x half-height optical drives 2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure 1x 3.5"/2.5" sata SSD/HDD with Front Access Storage Enclosure	IMI						adapter)				
2x 5.25" 9.0mm optical drives 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1x flex module for the following options: Tray 1: 9.0mm optical		• 2x ha	ays. Oup Ilf-height	optical dr	ives	j.					
Storage Bays Flex Bay Flex Bay		• 2x 5.2	25" 9.0m	nm optical	drives						
1x flex module for the following options: Tray 1: 9.0mm optical	Ctorono Douro										
Tray 1: 9.0mm optical	Storage Bays Fle						ccess Sto	orage Enclosu	re		
Tray 2: 15-in-1 LISB 3.0 reader, 2x Thunderholt, or 4-digit diagnostic display											
		Tray 1: 9.0mm optical									
Port 1 and 2: Front USB 3.0 Type-C or eSATA		Tray 1									
• 2x M.2 SSD with 2x Front Removable Drive Enclosures Dick box In to 4x 3.5" or 2.5" dicks with 4 dick boxs (2 boxs standard, 2 boxs entional)	Dia	Tray 1 Tray 2 Port 1	Port 1 and 2: Front USB 3.0 Type-C or eSATA								
[Disk day lop to 4x 3.3 of 2.3 disks with 4 disk days (2 days standard, 2 days optional)]		Tray 1 Tray 2 Port 1 • 2x M.	Disk bay Up to 4x 3.5" or 2.5" disks with 4 disk bays (2 bays standard, 2 bays optional)								

	Max Storage	PCIe AIC SSD. All HDD: 36TB using 6x 3.5" HDD	HDD/6x 2.5" SATA disks/4x 2.5" SAS HDD + 1x SSD, 9x M.2 SSD, and 1x PCIe AIC SSD					
	Power supply	Supports one of the following: • One fixed 690W, autosensing, 92%, • One fixed 900W, autosensing, 92%,	80 PLUS Platinum qualified 80 PLUS Platinum qualified					
	Media reader		lels. Optional UHS-II 15-in-1 USB 3.0 reader on					
	Network interfaces	Integrated one gigabit ethernet (Intel is ethernet or wireless adapters are avai	219LM), supports Wake-on-LAN. Optional PCIe lable					
	WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to 867Mbps						
	Security features	1.2 via UEFI setting. Optional access	ed Platform Module, TCG 2.0 compliant, switch to panel lock, Kensington lock, and pad lock					
	Intel vPro	Intel vPro technology supported. vPro	requires Wireless-AC 8265 if Wi-Fi is needed					
	Intel AMT	Intel Active Management Technology	11					
Front panel warning LED. ThinkStation Diagnostics for Windows. Photo-audi Diagnostic with Lenovo PC Diag-nostics for Android and iOS. Optional front 4-digit diag display on flex module								
	Base warranty	1 or 3-year limited onsite service with	9x5/NBD					
	HD Audio	Realtek ALC662 codec						
	Front ports	4x USB 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)						
	Rear ports	2x USB 2.0, 4x USB 3.0, 1x RJ-45, 3x PS/2	analog audio ports (line-in, line-out, mic-in), 2x					
	Supports the following optional ports: Front: 2 x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out 1 x eSATA on flex module 1 x USB Type-C on flex module, USB 3.1 gen 1 Rear: 1 x COM port 2 x USB Type-C ports via PCIe adapter, USB 3.1 gen 2. One 15W, one 5W Internal: 1 x internal USB 3.0 port							
		Temperature - operating Temperature - storage (no package) Temperature - storage (with package)	50 °F to 95 °F (10 °C to 35 °C) 14 °F to 140 °F (-10 °C to 60 °C)					
	Environmental	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)					
	specification	Humidity - operating	, , ,					
		, , ,	10%~80%, non-condensing					
		Humidity - storage (with package)	10%~90%, non-condensing					
	Environmental Certifications	RoHS-compliant. GREENGUARD. EP on model 30BE0008US and 30BE000	EAT Silver rating. ENERGY STAR 6.1 qualified 09US					
╝	ISV certifications	Please visit www.thinkworkstations.co	om/isv-certifications/					
-1		,						

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





ThinkStation P520c Platform Specifications

Timikotation i ozoo i lationii opeomoatione										
Form factor	25L Tower									
Dimensions	175mm/6.89" W x 4	26mm/	16.77" D	x 376m	m/14.8" H	(with feet	:)			
Weight	Maximum configura									
	Up to one 140W Int	el Xeor	n W family	proces	sor:					
	• Up to 18 cores at									
Processor Family	• Up to 4.0 GHz wi		res							
	Up to 24.75 MB (Up to DDR4-266		nrv sneed	ı						
Processor Sockets	1x FCLGA2066	o mem	лу эреес						\dashv	
Chipset	Intel C422 Chipset								\dashv	
Memory Sockets	4 DIMM sockets wit	h 4 cha	nnels						\dashv	
Memory Types	DDR4-2666 RDIMM									
Memory Capacity	128GB with 4 x 32GB RDIMMs								\dashv	
Memory Protection	ECC									
Welliory I Totection	Slot 1 (CPU) PCIe 3.0 x16, full height, full length, 75W,								\dashv	
Expansion slots							en ended			
					full length					
	Slot 4 (PCH) PC	Jie 3.0	x4, full h		nait length	, 25W, op	pen ended			
	Graphics		mory	Power		ector	SLI / NVlink	Max Qty		
	NVS 810		DDR3	68W	8xmi			1		
	Quadro P400	2GB GDDR5		30W	3xmi			2		
Diagrata Crambias	Quadro P600	2GB GDDR5 2GB GDDR5		45W	4xmi			2		
Discrete Graphics Offering	Quadro P620 Quadro P1000		GDDR5 GDDR5	40W 50W	4x m	iniDP		2		
Offering	Quadro P2000		GDDR5	75W	4x1111			2		
	Quadro P4000 8GB GDDR5 120W 4xDP 2									
	Quadro P5000 16GB GDDR5X 180W DVI-D DL+4xDP 1									
	Quadro RTX 4000				3xDP, 1x\		(1		
	Storage Controller	Type		Interface	9	RAID	C	ache		
	Onboard Intel RST			ATA 6Gb	o/s	0/1/10/5	;			
Storage Controller	9440-8i PCle	Opt SAS 12Gb/s, SATA 6Gb/s 0/1/10/5								
	NVMe Basic Opt PCIe NVMe 0/1/10									
	NVMe for Intel SSE	or Intel SSD Opt PCIe NVMe 0/1/10/5							_	
	Disk Type II	nterface	RPM		Offering		Max	ax Qty		
	3.5" SATA HDD SA			1TB	/2TB/4TB/	6TB		1		
Storage Support	2.5" SATA HDD SA	TA 6Gb	o/s 7.2K		B/500GB			4		
	2.5" SATA SSD SA				/512GB/1			4		
	M.2 PCIe SSD PCIe NVMe 256GB/512GB/1TB/2TB 5									
	Bay Type Maximum Drives Qty									
	M.2 slot 5x M.2 S	SD (2 o	nboard, 3	3 via PC	le to M.2 a	adapter)				
	2 flex bay				g:					
			optical dr m optical						- -	
					2x 3.5"/2.5	S SATA S	SD/HDD			
Storage Bays	1 2 5"						rage Enclosu	re		
- '	• 1x flex	module	for the fo				0			
			optical		o = 1		4 11 11 11			
							4-digit diagno	stic display		
					oe-C or eS ovable Dri		ures			
	Disk bay Up to 2x					TO LITITION				
				5.10	, -					

_	Max Storage	All HDD: 24TB using 4x 3.5" HDD							
┪		All SSD: 18TB using 4x 2.5" SATA SSI							
┨	Power supply	One fixed 500W, autosensing, 92%, 80							
	Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.0 read flex module							
	Network interfaces	Integrated one gigabit ethernet (Intel iz ethernet or wireless adapters are avai	219LM), supports Wake-on-LAN. Optional PCIe lable						
4	WLAN + Bluetooth	Optional Intel Wireless-AC 8265, 2x2, 867Mbps	2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to						
4	Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch 1.2 via UEFI setting. Optional access panel lock, Kensington lock, and pad lock							
4	Intel vPro	Intel vPro technology supported. vPro	requires Wireless-AC 8265 if Wi-Fi is needed						
4	Intel AMT	Intel Active Management Technology	11						
1	Diagnostic	ThinkStation Diagnostics for Windows. Optional front 4-digit diagnostic display on flex module							
	Base warranty	1 or 3-year limited onsite service with	9x5/NBD						
	HD Audio	Realtek ALC662 codec							
	Front ports	2x USB 3.0, microphone (3.5mm), hea							
	Rear ports	2x USB 2.0, $4x$ USB 3.0, $1x$ RJ-45, $3x$ analog audio ports (line-in, line-out, mic-in), $2x$ PS/2							
	Optional ports	Supports the following optional ports: Front: 2x Thunderbolt ports (USB Type-C) supports video-out 1x eSATA on flex module 1x USB Type-C on flex module, USE Rear: 1x COM port 2x USB Type-C ports via PCle adap Internal:	3 3.1 gen 1						
4		 1x internal USB 3.0 port 							
\parallel		Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)						
1		Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)						
1	Environmental	Temperature - storage (with package)	-40 °F to 140 °F (-40 °C to 60 °C)						
╣	specification	Altitude - operating	(Unpressurized): -50ft-10000ft (-15.2m-3048m)						
-		Humidity - operating	10%~80%, non-condensing						
1		Humidity - storage (with package)	10%~90%, non-condensing						
	Environmental Certifications	RoHS-compliant. GREENGUARD. EP on model 30BX0008US and 30BX000	EAT Silver rating. ENERGY STAR 6.1 qualified 9US						
	ISV certifications	Please visit www.thinkworkstations.co	Please visit www.thinkworkstations.com/isv-certifications/						

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













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

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

ThinkStation P720 Platform Specifications

	inkStation F120 Flationii Specifications								
Form factor	36L Tower								
Dimensions	175mm/6.89" W x 48	35mm/1	19.1" D x	(446mm/	′17.6" H (with fee	t)		
Weight	Maximum configurat	ion: 52.	.25 lb (23	3.7kg)					
Processor Family	Up to two 150 W Ge Gold, or Platinum: Up to 24 cores at Up to 3.6 GHz wit Up to 33 MB cach Up to DDR4-2933	2.1 GH h 4 cor	z es		Scalable	family p	roce	essors, Bronz	e, Silver,
Processor Sockets	2x FCLGA3647	IIIeIIIO	ry speed	<i>1</i>					
Chipset	Intel C621 Chipset								
Memory Sockets	12 DIMM sockets wi	th 10 al	hannala	e DIMM	oookoto i	with 6 ob	000	ala nar nraas	2004
			nanneis.	6 DIIVIIVI	Sockets v	VILLI O CI	lanın	eis per proce	85501
Memory Types	DDR4-2666 RDIMM 768GB (DDR4-2933 RDIMM) or 384GB (DDR4-2666 RDIMM)								
Memory Capacity	, , ,								
Memory Protection	ECC								
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 PCle 3.0 x4, full height, half length, 25W, open ended								
	Graphics	Me	emory	Power	Cor	nector		SLI / NVlink	Max Qty
	NVS 810		3 DDR3	68W		nini DP		OLI / I V III III	2
	Quadro P400		GDDR5			niniDP			3
	Quadro P600		GDDR5			niniDP			3
	Quadro P620	2GB	GDDR5	40W	4xr	niniDP			3
	Quadro P1000	4GB	GDDR5	50W	4xr	niniDP			3
	Quadro P2000	5GB	GDDR5	75W	4	xDP			3
Discrete Graphics	Quadro P4000	8GB	GDDR5	120W	4	xDP			2
Offering	Quadro P5000	16GB	GDDR5	X 180W	DVI-D	DL+4xD	P	SLI	2
	Quadro P6000	24GB	GDDR5	X 250W	DVI-D	DL+4xD	P		1
	Quadro RTX 4000	8GB	GDDR6	160W	3xDP, 1x	\[VirtualL \]	ink		2
	Quadro RTX 5000			6 265W					1
	Quadro RTX 6000			6 295W					1
	Quadro RTX 8000			6 295W					1
	Quadro GP100		B HBM2		1xDVI-D		DP		1
	Quadro GV100	32G	B HBM2	250W	4	xDP			1
	Storage Controller	Type		Interface		RAID)	Ca	che
	Onboard Intel RSTe		S	ATA 6Gb	's	0/1/10	/5		
	9440-8i PCIe			Gb/s, SAT		0/1/10			
Storage Controller	9460-16i PCle	Opt :	SAS 120	Gb/s, SAT	A 6Gb/s	0/1/10/	5/6	4GB DDR4	, SuperCap
	NVMe Basic	Opt		Cle NVM		0/1/1			
	NVMe Premium	Opt		Cle NVM		0/1/10			
	NVMe for Intel SSD	Opt	P	Cle NVM	е	0/1/10	/5		
	Disk Type In	iterface RPM		Offering		(Blind connec		ión + 9460)	
	3.5" SATA HDD SAT				TB/4TB/		6 (4	Also support x 2.5" SATA S	s additional SSD/HDD)
Storage Support	2.5" SATA HDD SAT			500GB/500GB FIPS			10		
			/s 10K		GB/600G			8	
	2.5" SATA SSD SAT			256GB/5	12GB/1T	B/2TB		10	
	2.5" PCIe SSD PC			OECOD'S	1.5TB	D/OTD		2	
	M.2 PCIe SSD PC				<u>12GB/1T</u> 480GB	D/ZIB		9	
	I OIE AIO SSD IFO	IN A IA			-00GB				

	Bay Type Ma	aximum Drives Qty			
	M.2 slot 9x M.2 SSD (2 onboard, 7 via				
	2 flex bays. Supports the follow				
	2x half-height optical drives				
Storage Bays	• 2x 5.25" 9.0mm optical drive				
		e + 1x 3.5"/2.5" SATA SSD/HDD			
	Flex Bay 1 x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure 1 x flex module for the following options:				
	Tray 2: 15-in-1 USB 3.0 read	der or 2x Thunderbolt			
	Port 1 and 2: Front USB 3.0	Type-C or eSATA			
		Removable Drive Enclosures			
		2 bays optional). Supports one of the following			
	configurations:				
	Disk bay 4x 3.5" SATA HDD				
		Disk bay 4x 3.5" SATA HDD + 4x 2.5" SATA SSD/HDD (Blind connection needed)			
	8X 2.5 SATA SSD/HDD or 8X 2.5 SAS HDD (Blind connection needed)				
	• 2x 2.5" PCle SSD + 2x 3.5"/2.5" disks (Blind connection needed)				
		DD/10x 2.5" SSD/10x 2.5" HDD + 2x PCle AIC			
Max Storage	SSD.				
	All HDD: 36TB using 6x 3.5" HDD	SSD, 9x M.2 SSD, and 2x PCIe AIC SSD			
		55D, 9X W.2 55D, and 2X Pole AIC 55D			
Dower oupply	Supports one of the following:	2 DLUC Distinum qualified			
Power supply	• One fixed 690W, autosensing, 92%, 80				
	• One fixed 900W, autosensing, 92%, 80	s. Optional UHS-II 15-in-1 USB 3.0 reader on			
Media reader	flex module	s. Optional UHS-II 15-In-1 USB 3.0 reader on			
Mahuadi		I AA L aa aslaW atracerus (TAO tO) baa M IO tO) la			
Network interfaces	on both two ports. Optional PCIe etherne	el i219LM and i210AT), supports Wake-on-LAN			
WLAN +		4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to			
Bluetooth	867Mbps	Dieter Mediale TOO 0 0 consultant auditale to			
Security features		Platform Module, TCG 2.0 compliant, switch to			
Security leatures	1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensington				
Intel vPro	lock, and pad lock	equires Wireless-AC 8265 if Wi-Fi is needed			
Intel AMT					
IIILEI AIVIT	Intel Active Management Technology 11				
Diognostic	Front panel warning LED. ThinkSta-tion Diagnostics for Windows. Photo-audio trans-				
Diagnostic	fer with Lenovo PC Diag-nostics for Android and iOS. Optional front 4-digit diagnostic display on flex module				
Dood Warranty		E/NDD			
Base warranty	1 or 3-year limited onsite service with 9x	(3/NBD			
HD Audio	Realtek ALC662 codec				
Front ports), 1x combo audio/microphone jack (3.5mm)			
Rear ports		nalog audio ports (line-in, line-out, mic-in), 2x			
ricai porto	PS/2				
	Supports the following optional ports:				
	Front:				
	2x Thunderbolt ports (USB Type-C) on flex module, one of two ports				
	supports video-out				
Ontional narta	1x eSATA on flex module 1x USB Time Conflex module				
Optional ports	1x USB Type-C on flex module, USB 3.1 gen 1 Poor:				
	Rear:				
	 1x COM port 2x USB Type-C ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W 				
	Internal:				
	1x internal USB 3.0 port				
Environmental specification	Temperature - operating	50 °F to 95 °F (10 °C to 35 °C)			
	Temperature - storage (no package)	14 °F to 140 °F (-10 °C to 60 °C)			
	Temperature - storage (no package)	-40 °F to 140 °F (-40 °C to 60 °C)			
	Altitude - operating	(Unpressurized): 0-10000ft (0-3048m)			
	Humidity - operating	10%~80%, non-condensing			
	Humidity - storage (with package)	10%~90%, non-condensing			
English and the state of the st	D.110				
Environmental	HoHS-compliant. GREENGUARD. EPE	AT Silver rating. ENERGY STAR 6.1 qualified			
Certifications on model 30BA0007US and 30BA0008US					
ISV certifications	ns Please visit www.thinkworkstations.com/isv-certifications/				
Note:					

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













ThinkStation P920 Platform Specifications

Form factor	55L Tower								
Dimensions	200mm/7.87" W x 620mm/24.4" D x 446mm/17.56" H (with feet)								
Weight	Maximum configuration: 71.3 lb (32.3kg)								
Processor Family	Up to two 205 W Gen 1 or Gen 2 Intel Xeon Scalable family processors, Bronze, Silver, Gold, or Platinum: • Up to 28 cores at 2.5 GHz • Up to 3.6 GHz with 4 cores • Up to 38.5 MB cache • Up to DDR4-2933 memory speed								
Processor Sockets	2x FCLGA3647								
Chipset	Intel C621 Chipset								
Memory Sockets	16 DIMM sockets w	vith 12 cha	ınnels.	8 DIMN	/I sockets wit	h 6 chai	nnels	per pro	cessor
Memory Types	DDR4-2666 RDIMN								
Memory Capacity	1TB (DDR4-2666 L	RDIMM o	r DDR	4-2933	RDIMM) or 5	12GB (DDR4	-2666 F	RDIMM)
Memory Protection	ECC								
Expansion slots	Slot 1 (CPU1) PCle 3.0 x16, full height, full length, 75W, double-width Slot 2 (CPU1) PCle 3.0 x4, full height, full length, 25W, open ended Slot 3 (CPU1) PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x4, full height, full length, 25W, open ended PCle 3.0 x4, full height, half length, 25W, open ended PCle 3.0 x16, full height, half length, 75W PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x16, full height, full length, 75W, double-width PCle 3.0 x16, full height, full length, 75W								
	Graphics	Memo	ory	Power	Connec	tor	SLI /	NVlink	Max Qty
	NVS 810	4GB D		68W	8xmini				2
	Quadro P400	2GB GE		30W	3xminil				5
	Quadro P600	2GB GE		45W	4xminil				4
	Quadro P620 Quadro P1000	2GB GE		40W 50W	4xminil				4
	Quadro P2000	5GB GE		50W 4xminiDP 75W 4xDP				4	
Discrete Graphics	Quadro P4000	8GB GE						4	
Offering	Quadro P5000	16GB GD						SLI	3
	Quadro P6000	24GB GD			DVI-D DL+		:	SLI	3
	Quadro RTX 4000 8GB GDDR6 160W 3xDP, 1xVirtualLink 3								
	Quadro RTX 5000 16GB GDDR6 265W 4xDP, 1xVirtualLink Quadro RTX 6000 24GB GDDR6 295W 4xDP, 1xVirtualLink			/Link	3				
	Quadro RTX 6000	24GB GI	DDR6	295W	4xDP, 1xVir	ualLink	N/	/Link	2
	Quadro RTX 8000				4xDP, 1xVir			/Link	2
	Quadro GP100 Quadro GV100	16GB H 32GB H		250W	1xDVI-D DL 4xDF			/Link /Link	3
	Storage Controller		DIVIZ			RAII			Cache
	Onboard Intel RST			Interf SATA 6		0/1/10		,	Jacrie
	9440-8i PCle		SAS 1		SATA 6Gb/s				
Storage Controller	9460-16i PCle	•			SATA 6Gb/s				B DDR4, perCap
	NVMe Basic	Opt		PCIe NVMe 0/1/10		0	Сарогоар		
	NVMe Premium	Opt	pt PCIe NVMe		0/1/10/5				
	NVMe for Intel SSI	Opt_		PCIe N	VMe	0/1/10)/5		
	Disk Type I	nterface	RPM	Offering			Qty used)		
	3.5" SATA HDD SA	SATA HDD SATA 6Gb/s 7.2				В	6 (Also supports additional 4x 2.5" SATA SSD/HDD)		
Storage Support		.5" SATA HDD SATA 6Gb/s 7.2k		500GB/500GB FIPS			10		
Clorage Gupport	2.5" SAS HDD SA		10K	300GB/600GB			8		
	2.5" SATA SSD SA			256GB	3/512GB/1TB	/2TB	10		
	2.5" PCIe SSD PC	Cle NVMe		2560-	<u>1.5TB</u> 8/512GB/1TB	/2TB	9		
	PCIe AIC SSD PC			20001	480GB	1210		2	
	1 C10 / 110 COD 1 C	JIS INVIVIE			.0000				_

	Pay Type Maximum Drives Oty					
	Maximum Drives Qty Maximum Drives Qty					
	M.2 slot 9x M.2 SSD (2 onboard, 7 via PCle to M.2 adapter) 2x 3.5" or 2.5" disks. Supports the following:					
	3x half-height optical drives					
	 2x 5.25" 9.0mm optical drives 					
	 1x 5.25" 9.0mm optical drive + 1x 3.5"/2.5" SATA SSD/HDD 					
	Flex Bay 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure					
04	TX flex module for the following options.					
Storage Bays	Tray 1: 9.0mm optical					
	Tray 2: 15-in-1 USB 3.0 reader or 2x Thunderbolt Port 1 and 2: Front USB 3.0 Type-C or eSATA					
	3x M.2 SSD with 3x Front Removable Drive Enclosures					
	8 disk drives with 4 bays (2 bays standard, 2 bays optional). Supports one of					
	the following configurations:					
	Disk bay • 4x 3.5" SATA HDD					
	• 4x 3.5" SATA HDD + 4x 2.5" SATA SSD/HDD					
	• 8x 2.5" SATA SSD/HDD or 8x 2.5" SAS HDD					
	Supports up to 9x M.2 SSD + 6x 3.5" HDD/10x 2.5" SSD/10x 2.5" HDD + 2x PCIe AIC SSD.					
Max Storage	All HDD: 36TB using 6x 3.5" HDD					
	All SSD: 38.96TB using 10x 2.5" SATA SSD, 9x M.2 SSD, and 2x PCIe AIC SSD					
	One fixed 1400 watts, autosensing, 92% PSU, 80 PLUS Platinum qualified.					
Power supply	Countries with input voltage under 115V, output power limited to 1125 watts					
Media reader	SD USB 2.0 card reader on most models. Optional UHS-II 15-in-1 USB 3.0 reader on					
iviedia reader	flex module .					
Network	Integrated two-port gigabit ethernet (Intel i219LM and i210AT), supports Wake-on-LAN					
interfaces	on both two ports. Optional PCIe ethernet are available					
WLAN +	Optional Intel Wireless-AC 8265, 2x2, 2.4GHz/5GHz, 802.11ac, Bluetooth 4.2, up to					
Bluetooth	867Mbps					
Security features	Power-on and admin password. Trusted Platform Module, TCG 2.0 compliant, switch to 1.2 via UEFI setting. Chassis intrusion switch. Optional access panel lock, Kensington					
Decurity leatures	lock, and pad lock					
Intel vPro	Intel vPro technology supported. vPro requires Wireless-AC 8265 if Wi-Fi is needed					
Intel AMT	Intel Active Management Technology 11					
Diagraphia	Front 4-digit diagnostic display. ThinkStation Diagnostics for Windows. Photo-audio					
Diagnostic	transfer with Lenovo PC Diagnostics for Android and iOS					
Base warranty	1 or 3-year limited onsite service with 9x5/NBD					
HD Audio	Realtek ALC662 codec					
Front ports	4x USB 3.0 (includes one 11W charging), 1x combo audio/microphone jack (3.5mm)					
Rear ports	2x USB 2.0, 4x USB 3.0, 2x RJ-45, 3x analog audio ports (line-in, line-out, mic-in), 2x					
ricai porto	PS/2					
	Supports the following optional ports:					
	Front:					
	 2x Thunderbolt ports (USB Type-C) on flex module, one of two ports supports video-out 					
	1x eSATA on flex module					
Optional ports	1x USB Type-C on flex module, USB 3.1 gen 1					
	Rear:					
	• 1x COM port					
	2x USB Type-C ports via PCle adapter, USB 3.1 gen 2. One 15W, one 5W Internal:					
	• 1x internal USB 3.0 port					
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)					
	Altitude - operating (Unpressurized): 0-10000ft (0-3048m)					
specification	Humidity - operating 10%~80%, non-condensing					
	Humidity - storage (with package) 10%~90%, non-condensing					
Environmental Certifications	RoHS-compliant. GREENGUARD. EPEAT Silver rating. ENERGY STAR 6.1 qualified on model 30BC0008US and 30BC0009US					
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

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

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

Lenovo Services:

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

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

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

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

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

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

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

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

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

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Summary of Changes

This section describes the technical changes made in this edition.

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

Ju]j, 2019 - Version 5%

Additions in this update

► New product(s)

ThinkVision M14 announced June 2019

► New model(s)

None

▶ Others

None

Withdrawals in this update

► Withdrawn product(s)

None









PORTABLE USB-C MONITOR CRAFTED FOR IMPROVED PRODUCTIVITY

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



Extreme **Portability**



Connectivity



Flexibility

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



Weight 570g



Screen Size 14 inches



Brightness 300 nits (Typical)





EXPERIENCE ADVANCED CONNECTIVITY

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



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



USB Ports 2 x USB Type-C



Cable USB Type-C to C



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

is built for varied job roles. With a tilt angle of -5°~90°, you can position your monitor 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.







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



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

Temperature - Operating

Humidity - Operating

Altitude - Operating

Humidity - Non-operating

Altitude - Non-operating

Temperature - Non-operating

0° to 40°C

-20° to 60°C

30 to 80%

30 to 90%

0 to 5000 m

0 to 40,000 ft

Yes

Yes

85%

WW

Warranty

3 Years

7.1

CCC

Yes

PVC free

Mercury free

PCC % of plastic resins

Geography Availability

ENERGY STAR® Rating

Arsenic-free Glass

Panel Size 14-inch

Screen Dimensions (W x H, mm)

Panel Type In-Plane Switching

Backlight **WLED**

16:9

Dot/Pixel Per Inch (DPI/PPI) 157

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

Refresh Rate 60 Hz

Brightness (typical) 300 cd/m²

Contrast Ratio (typical)

3M:1

Colour Gamut NTSC (CIE 1931) 72%

16.7 Million

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

Yes

Video Input Signals

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

output)

ENERGY STAR® Power Consumption

Power Consumption Sleep/Off

Monitor Stand Tilt -5°~90°

309.31 x 173.99 mm

Aspect Ratio

Resolution 1920 x 1080

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

Response Time (typical) 6ms with OD

Dynamic Contrast Ratio (typical)

Color Support (typical)

Color Depth

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

(Pon) 4.88 W

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

Mode < 0.3 W

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

> **Height Adjustable Foot** Tilt 0°~90°



Eye-care Technology Low blue light

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

External (no adapter bundle) Voltage Required

Tilt Angle (front/back) -5° / 90°

Mounting Support Yes (100 mm)

Bezel Color Raven Black

5.48mm Bezel Width (top / bottom)

5.47 mm / 23.87 mm

Size Packed (D x H x W) (mm / inch) 276 x 61 x 402 mm /

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

(Lowest position) 96.54 x 209.03 x 323.37 mm / 3.8 x 8.23 x 12.73 inches

Size Unpacked w/stand $(D \times H \times W) (mm / inch)$ (Highest position) 96.54 x 220.03 x 323.37 mm /

3.8 x 8.66 x 12.73 inches 260.87 x 69.55 mm /

1.67 kg / 3.67 lbs.

1 x Monitor with stand

1x QSG

1x Pair of clips

1 x ThinkVision M14 sleeve

1 x USB Type-C cable (1 m)

Up to 65 W **Power Supply**

DC 5 V to 20 V

Kensington™ Lock Slot

Cable Management Yes

Bezel Width (Side)

Stand base footprint area (mm²)

Windows 7 / 10 10.27 x 2.74 inches Weight Packed (kg / lbs.)

China Energy Efficiency Standard

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

EPEAT

Bronze

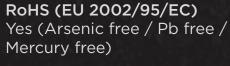


Image Quality Capability ISO 9241-307

Windows Certification

Low Blue Light / Eye Comfort Yes (Low Bluelight)

















Name E1922s Wide Flat Panel Monitor

Case color **Black**

Type-model 60G2AAR6US / 60G2AAT6EU

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

Viewable image size

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

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

Brightness 200 nits or cd/m2 (typical)

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

Color gamut 72%

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

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

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

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

6.03 lb; 2.74 kg Weight

3 year (includes backlight) March 2014 Limited warranty4

Available date

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

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

Preset resolutions VGA:

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

SXGA: 1280x1024 WXGA: 1366x768

Presets / user settings Standard presets: 15

user settings: 16

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

Rotating screen

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

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

Multiple input None

Monitor connectors

Signal cables

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 18.5-inch monitor

• Supports HD 1366x768 resolution

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

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

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

Microsoft Windows 8 / Windows 8.1 certified



ThinkVision E1922s Wide Monitor

Lenovo February 2014













E2054 Wide Flat Panel Monitor Name Raven black

Case color Type-model 60DFAAR1US / 60DFAAT1EU

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

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

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

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

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

Viewing angle at 10:1 CR

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

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

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

6.17 lb; 2.8 kg Weight

Limited warranty 3 year (includes backlight)

Available date November 2015

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

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

Preset resolutions 640x480, 720x400

SVGA: 800x600 XGA: 1024x768

1280x768, 1280x1024 SXGA:

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

Presets / user settings user settings: 10

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

Rotating screen None

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

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

Multiple input None

Monitor connectors

Signal cables

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 19.5-inch monitor

• Supports HD 1440x900 resolution

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

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

Microsoft Windows 10 certified



ThinkVision E2054 Wide Monitor

Lenovo November 2015











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

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

Viewable image size

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

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

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

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

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

Dimensions (HxWxD)

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

integrated (no external brick-like power supply)

10.69 lb; 4.85kg Weight

3 year (includes backlight) April 2015 Limited warranty4

Available date

VESA-compliant² VESA DDC2B/CI, EDID 1.3

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

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

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

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

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

Features

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

- Microsoft Windows 10 certified



ThinkVision LT1913p Square Monitor

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

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













T1714 Square Flat Panel Monitor Name

Case color **Black**

Type-model 60FDHAR1US / 60FDHAT1EU

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

Viewable image size

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

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

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stand

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

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

Weight Limited warranty 5.75 lb; 2.61kg

3 year (includes backlight) September 2015

Available date

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

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

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

SVGA: 800x600

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

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

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

See all monitors at www.lenovo.com/thinkvision













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

Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.2915 x 0.2915 mm Dot/Pixel per Inch 87 dpi Brightness 250 nits or cd/m2 (typical)

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

Viewing angle at 10:1 CR 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, and height adjustable stand Stand

Bezel width Dimensions (HxWxD)

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

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

Limited warranty4 Available date

VESA-compliant² Power management Ergonomics Emission standards

VESA DDC2B/CI ENERGY STAR® qualified ISO 9241-307

FCC Class B

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

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

SVGA: 800x600 XGA:

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

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

Features

• Widescreen 19.5-inch monitor • Supports 1440x900 resolution

Supports ThinkCentre Tiny Clamp Bracket

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

ÉPEAT Gold certified

· Supports optional soundbar Microsoft® Windows® 7 certified
 Microsoft Windows 8 / Windows 8.1 certified

Microsoft Windows 10 certified



ThinkVision T2054p Wide Monitor

Viewing adjustments Tilt: 22° backward, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Rotating screen On screen display On screen display with digital user controls (8 languages) Direct access (buttons on front) for automatic image setup, dual input and brightness
Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Control features Multiple input Dual input (two different PCs attach to two different connectors; one PC snows image, selectivia L (1) VGA 15-pin D-shell, analog, blue (2) HDMI (1.4), digital, **HDCP-compliant** (3) DisplayPort, digital, black, **HDCP-compliant** (1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter (2) detachable, DisplayPort at each end, digital, 1.8 meter Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Monitor connectors Signal cables Mounting features Security

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

1.8 meter black power cord

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



E21 Wide Flat Panel Monitor Name 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

Viewable image size

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

Aspect ratio 16:9

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

Brightness 250 nits or cd/m2 (typical)

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

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

Tilt adjustable stand Stand Bezel width

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

18 watts typical, 23 watts maximum, Power supply

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

Weight Limited warranty

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

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

Emission standards FCC Class B

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

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

SVGA: XGA: 1024x768, 1152x864

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

WSXGA+: 1680x1050 Full HD: 1920x1080

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

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

Rotating screen None

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

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

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

Signal cables

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

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

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 23.8-inch monitor

• Supports 1920x1080 resolution Supports ThinkCentre Tiny VESA mount

Supports optional soundbar

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision E24 Wide Monitor

Lenovo August 2017













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

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

1000:1 (typical)

99% sRGB

4ms (extreme) / 6ms (typical)

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

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

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

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

Viewable image size

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

Native resolution Aspect ratio 16:9

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

Contrast ratio Pixel response time

Color gamut Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date VESA-compliant

April 2017 VESA DDC2B/CI ENERGY STAR® qualified

Power management

Presets display modes

USB hub

Ergonomics Emission standards Environmental

ISO 9241-307 FCC Class B

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

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

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

HDMI: 22; DP: 14

Features

 Widescreen 23.8-inch monitor • Supports 2560x1440 resolution

· Supports optional soundbar

Supports ThinkCentre Tiny Clamp Bracket

 Includes dual input connection for attachment to two systems concurrently

EPEAT Gold certified

• Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision P24h Wide Monitor

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

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

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

Multimedia

Camera

Multiple input

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

Signal cables

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

Security

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

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













Lenovo ThinkVision P24q

P24q Wide Flat Panel Monitor Name

Case color Black

61A5GAR3US / 61A5GAT3EU Type-model

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

Viewable image size

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

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

Pixel pitch (mm) 0.2058 x 0.2058mm

Dot/Pixel per Inch 123 dpi

Brightness 300 nits or cd/m2 (typical)

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

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

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

Bezel width **Dimensions**

(HxWxD, including stand)

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

67 watts maximum (with USB),

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

integrated (no external brick-like power supply)

12.35 lb; 5.6kg (including stand)

Weight Limited warranty 3 year January 2017 Available date

VESA-compliant VESA DDC2B/CI

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

Multiple input

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

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



ThinkVision P24q Monitor













Think Vision® S22e-19

DISPLAY

Panel Size

21.5 inch

Screen Dimensions (H x V) (mm)

476.06 (H) × 267.79 (V)

Panel Type

VΑ

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.2480×0.2480

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support (typical)

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

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

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

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

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

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

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

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

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

Weight Packed (kg/lbs.)

4.07kg / 8.97 lbs.

Weight Unpacked (kg/lbs.)

2.75kg / 6.06 lbs.

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

2.46kg / 5.42 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front / back)

-5°/22°

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.2 mm

WHAT'S IN THE BOX

Monitor with stand

1x HDMI Cable

1x Power Cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

TCO

TCO 7.0/TCO Edge 2.0

EPEAT™

Gold

RoHS

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Low Blue Light

Yes















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Think Vision® S24e-10

DISPLAY

Panel Size

23.8"

Screen Dimensions (H x V) (mm)

527.04 (H) × 296.46 (V)

Panel Type

VA

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 × 1080

Pixel Pitch (H x V) (mm)

 0.2745×0.2745

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

3000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

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

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

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

(Lowest Position)

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

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

(Highest Position)

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

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

(Head Only)

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

Weight Packed (kg/lbs.)

4.84kg / 10.67 lbs.

Weight Unpacked (kg/lbs.)

3.36kg / 7.41 lbs.

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

3.07kg / 6.77 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes (by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5º / 22º

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 22 mm

WHAT'S IN THE BOX

Monitor with stand

1 x HDMI Cable

1 x Power Cable Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

EPEAT™

Gold

ULE

Gold

RoHS Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0 to 40°C

Low Blue Light

Yes





















T2224d Wide Flat Panel Monitor Name Bezel color **Black**

Type-model 61B1JAR1US / 61B1JAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight

Viewable image size Max view area (W x H)

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

Native resolution Aspect ratio Pixel pitch (mm)

16:9 0.248 x 0.248 mm 102 dpi

Dot/Pixel per Inch

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

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

Color gamut

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

Stand Tilt stànd

Bezel width Sides: 0.69" (17.6mm)

Dimensions (HxWxD)

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

20 watts typical, 25 watts maximum Power supply

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

6.48 lb; 2.94 kg

3 year (includes backlight)
March 2017 Weight Limited warranty

Available date

VESA-compliant VESA DDC2B/CI

Power management ENERGY STAR® qualified

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024 WXGA:

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

WSXGA+: 1680x1050 Full HD: 1920x1080

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

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

Rotating screen None

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

USB hub None

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

Monitor connectors

Signal cables

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

Security

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

Supports ThinkCentre Tiny via VESA back mount

systems concurrently (analog and digital)

Includes dual input connection for attachment to two

Widescreen 21.5-inch monitor

· Supports optional soundbar

EPEAT Gold certified

• Supports 1920x1080 resolution

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified

ThinkVision T2224d Wide Monitor













T2254 Wide Flat Panel Monitor Name

Bezel color Raven black Type-model 60F6HAR1EU

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

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

Native resolution

Aspect ratio 16:10 Pixel pitch (mm)

0.282 x 0.282 mm Dot/Pixel per Inch 90 dpi

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

Color gamut 72%

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

Stand

Bezel width Dimensions (HxWxD)

380.2mm H x 509.3mm W x 244.2mm D

16 watts typical, Power supply

22 watts maximum,

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

Weight Limited warranty

Available date

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

Ergonomics ISO 9241-307 Emission standards None

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

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768

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

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

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

Rotating screen

Viewing adjustments

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

Control features

USB hub None

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

Signal cables

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

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

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

1.8 meter black power cord

Limited Warranty

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

Kensington MicroSaver Cable Lock

73P2582 Kensington Twin Head Cable Lock 45K1620

Accessories

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

See all monitors at www.lenovo.com/thinkvision

Features

Widescreen 22.0-inch monitor

• Supports 1680x1050 resolution Supports ThinkCentre Tiny Clamp Bracket

Includes dual input connection for attachment to two

systems concurrently (analog and digital) ÉPEAT Gold certified

Supports optional soundbar

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

Microsoft Windows 10 certified

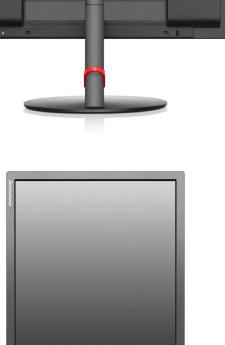


ThinkVision T2254 Wide Monitor

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T2254p Wide Flat Panel Monitor Name

Bezel color Raven black

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

60CCMAT2EU / 61BAMAT2EU

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

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

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

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

Pixel response time 5ms (typical) Color gamut

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

Bezel width Dimensions (HxWxD)

371.7mm H x 509.3mm W x 242.7mm D

Power supply

20 watts typical, 25 watts maximum,

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

Weight Limited warranty

10.14 lb; 4.60 kg

3 year (includes backlight) Available date March 2015

VESA-compliant Power management Ergonomics

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 Emission standards FCC Class B

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

Preset resolutions 640x350, 640x480, 720x400

SVGA: 800x600 XGA: 1024x768, 1152x864

SXGA: 1280x1024

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

WSXGA+: 1600x900, 1680x1050

Presets / user settings Standard presets: 28;

user settings: 20

Features

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



ThinkVision T2254p Wide Monitor

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

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

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

Multiple input Monitor connectors

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

Signal cables

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

Security

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

1.8 meter black power cord

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

Accessories

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

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













Preset resolutions

Presets display modes

T22i Wide Flat Panel Monitor Name Bezel color **Black** Type-model 61A9MAR1US / 61A9MAT1EU Panel TFT-LCD, In-Plane Switching (IPS), White LED backlight **21.5"** (**546mm**) diagonal 18.74" x 10.54" (476.1mm x 267.8mm) **1920x1080** Viewable image size Max view area (W x H) Native resolution Aspect ratio 16:9 Pixel pitch (mm) 0.248 x 0.248 mm Dot/Pixel per Inch 102 dpi Brightness 250 nits or cd/m2 (typical) Contrast ratio 1000:1 (typical) Pixel response time 6ms (typical); 4ms (extreme mode) Color gamut 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical Tilt, swivel, pivot, and height adjustable stand Sides: 0.08" (2.0mm)
14.08" H x 19.28" W x 9.92" D;
357.6mm H x 489.7mm W x 251.9mm D Viewing angle at 10:1 CR Stand Bezel width Dimensions (HxWxD) 16.5 watts typical, 55 watts maximum (with USB 3.0 hub), Power supply <0.5 watts standby/suspend, universal, integrated (no external brick-like power supply) 10.85 lb; 4.92 kg

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

VGA:

SVGA:

SXGA:

WXGA: WXGA+: WSXGA+:

Full HD:

HDMI: 17;

XGA:

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

Supports ThinkCentre Tiny via VESA back mount

Includes dual input connection for attachment to two

Widescreen 21.5-inch monitor

· Supports optional soundbar

systems concurrently

• Supports 1920x1080 resolution



Features

ThinkVision T22i Wide Monitor

Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Viewing adjustments Screen pivots 90 degrees from landscape to portrait Rotating screen On screen display On screen display with digital user controls (8 languages) Direct access (buttons on front) for power, menu, input source select and brightness USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0) Control features USB hub Multiple input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) (1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, HDCP-compliant
(3) DisplayPort, digital, black, HDCP-compliant
(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter Monitor connectors Signal cables Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Mounting features Security Monitor with stand, Safety and Warranty Information, 1.8 meter analog signal cable, 1.8 meter DP signal cable, Ship group 1.8 meter USB signal cable, 1.8 meter black power cord

640x350, 640x480, 720x400

1024x768, 1152x864

1280x768, 1366x768 1440x900, 1680x900

800x600

1280x1024

1680x1050

1920x1080

DP: 17

Limited Warranty

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

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

See all monitors at www.lenovo.com/thinkvision













T22v Wide Flat Panel Monitor Name

Bezel color

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

Viewable image size Max view area (W x H)

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

Dot/Pixel per Inch 102 dpi

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

Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width

Dimensions (HxWxD)

Power supply

Weight Limited warranty Available date

VESA-compliant

Power management Ergonomics Emission standards Environmental

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

VGA: SVGA:

1280x1024

WSXGA+: 1680x1050 Full HD: 1920x1080

Presets display modes Presets: 24; user modes: 20

Black

White LED backlight

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

0.248 x 0.248 mm

1000:1 (typical)

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

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

485.8mm H x 489.7mm W x 251.9mm D

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

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

10.16 lb; 4.61 kg

3 year (includes backlight)

October 2017 VESA DDC2B/CI

ENERGY STAR® qualified ISO 9241-307 FCC Class B

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

WXGA+: 1440x900, 1600x900 **Features**

- Widescreen 21.5-inch monitor • Supports 1920x1080 resolution
- · Supports optional soundbar
- Supports ThinkCentre Tiny via VESA back mount

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



ThinkVision T22v Wide Monitor

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

Rotating screen On screen display Control features USB hub Multimedia

On screen display with digital user controls (8 languages) Direct access for power, menu, input source select, volume up / down, speaker mute and microphone mute USB 3.0 Hub: 1 port into PC (USB 3.0); 2 ports for accessories (2 USB 3.0)

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

Camera Integrated FHD camera with IR
Support HDMI, DisplayPort, VGA
(1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, **HDCP-compliant**(3) DisplayPort, digital, black, **HDCP-compliant**(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, DisplayPort at each end, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount
Security keyhole for attachment of optional cable lock (Kensington® lock-compatible) Multiple input Monitor connectors

Signal cables

Mounting features Security

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

Limited Warranty

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

Accessories

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

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













T2324d Wide Flat Panel Monitor Name

Bezel color **Black**

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

Viewable image size

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

1920x1080 Native resolution

Aspect ratio 16:9

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

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

Color gamut 72%

Viewing angle at 10:1 CR

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

Stand Bezel width

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

400.3mm H x 545.8mm W x 204.9mm D

Power supply 20 watts typical, 27 watts maximum

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

Weight Limited warranty

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

Available date

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

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

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

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

WXGA: 1280x768, 1280x800, 1366x768

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

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

Tilt: 22° back, -5° Viewing adjustments

Rotating screen None

On screen display

Control features USB hub

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

None

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

Monitor connectors

Signal cables

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

Security

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features Widescreen 23.0-inch monitor

• Supports 1920x1080 resolution

· Supports optional soundbar Supports ThinkCentre Tiny via VESA back mount

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

EPEAT Gold certified

Microsoft® Windows® 7 certified

Microsoft Windows 10 certified



Lenovo July 2016













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

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

1920x1200

Features

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



ThinkVision T23d-10 Wide Monitor

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

Limited Warranty 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	

WUXGA:













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

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

Viewable image size Max view area (W x H)

Native resolution Aspect ratio

Pixel pitch (mm) Dot/Pixel per Inch Brightness

Contrast ratio Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

USB hub

61ABMAR1US / 61ABMAT1EU

White LED backlight

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

16:9 0.2652 x 0.2652 mm

95.8 dpi 250 nits or cd/m2 (typical)

1000:1 (typical) 6ms (typical)

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

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

integrated (no external brick-like power supply)

10.85 lb; 4.92 kg 3 year (includes backlight)

Available date April 2017

VESA-compliant VESA DDC2B/CI

Power management ENERGY STAR® qualified

Ergonomics ISO 9241-307 Emission standards FCC Class B

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

Preset resolutions VGA: 640x480, 720x400

SVGA: 800x600

XGA: 1024x768, 1152x864

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

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

 Widescreen 23-inch monitor • Supports 1920x1080 resolution

Supports ThinkCentre Tiny Clamp Bracket

Includes dual input connection for attachment to two

systems concurrently ÉPEAT Gold certified

Microsoft® Windows® 7 certified
Microsoft Windows 10 certified



ThinkVision T23i Wide Monitor

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

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

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

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

Multiple input

Monitor connectors

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

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

Security

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

1.8 meter USB signal cable, 1.8 meter black power cord

Limited Warranty

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

Accessories

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

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













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

Dot/Pixel per Inch Brightness Contrast ratio Pixel response time

Color gamut Viewing angle at 10:1 CR Stand

Bezel width Dimensions (HxWxD)

Power supply

Weight Limited warranty

Available date VESA-compliant Power management

Ergonomics

Emission standards

Environmental

Preset resolutions

Presets / user settings

Viewing adjustments Rotating screen On screen display

Control features USB hub Multiple input Monitor connectors

Signal cables

Mounting features Security

Ship group

94 dpi

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

7ms (typical) 77.4% 178° (+/- 89°) horizontal, 178° (+/- 89°) vertical

Tilt, swivel, pivot, and height adjustable stand Sides: 0.74" (18.8mm) 15.85" H x 21.94" W x 10.39" D; 402.5mm H x 557.4mm W x 264.2mm D

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

integrated (no external brick-like power supply) 13.60 lb; 6.15 kg

3 year (includes backlight) March 2015

VESA DDC2B/CI ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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

VGA: 640x350, 640x480, 720x400

SVGA: 800x600

XGA: 1024x768 SXGA: 1280x1024 WXGA:

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

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

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

Screen pivots 90 degrees from landscape to portrait

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

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

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

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

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

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

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

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 24.0-inch monitor • Supports 1920x1200 resolution

Supports ThinkCentre Tiny Clamp Bracket

Supports optional soundbar

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

EPEAT Gold certified

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

Microsoft Windows 10 certified



ThinkVision T2454p Wide Monitor

Lenovo November 2016

73P2582

45K1620













T24d Wide Flat Panel Monitor Name

Bezel color **Black**

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

White LED backlight Viewable image size

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

Native resolution Aspect ratio 16:10 Pixel pitch (mm) 0.27 x 0.27 mm

Dot/Pixel per Inch 94 dpi Brightness 300 nits or cd/m2 (typical)

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

Color gamut

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

Bezel width Dimensions (HxWxD)

Power supply

22 watts typical, 64 watts maximum (with USB 3.0 hub), <0.3 watts standby/suspend, universal, integrated (no external brick-like power supply)

Weight Limited warranty 12.41 lb; 5.63 kg

3 year (includes backlight)

Available date June 2017

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

Emission standards FCC Class B

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

Preset resolutions VGA:

640x480, 720x400 SVGA: 800x600 XGA: 1024x768 SXGA: 1280x1024 WXGA: 1366x768 WXGA+: 1440x900 WSXGA+: 1680x1050 Full HD: 1920x1080 WUXGA: 1920x1200

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

- Widescreen 24-inch monitor
- Supports 1920x1200 resolution Supports ThinkCentre Tiny Clamp Bracket
- Supports optional soundbar
- Includes dual input connection for attachment to two
- systems concurrently EPEAT Gold certified
- Microsoft® Windows® 7 certified
- Microsoft Windows 10 certified



ThinkVision T24d Wide Monitor

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

Rotating screen On screen display Control features

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 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)

USB hub

Multiple input

Monitor connectors

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

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

Security

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

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

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 T24i-10 MONITOR



SPECIFICATIONS

DISPLAY

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

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

Response Time (gray to gray) OSD Controls Buttons Languages

23.8" Wide

In-Plane Switchng WI FD 1920 x 1080 16:9 Yes Yes

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

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

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

DIMENSIONS (W x D x H)

Size Packed (mm) 422 x 622 x 190 (inches) 16 61" x 24 48" x 7 48" Size Unpacked with Stand Lowest Position 540.2 x 261.75 x 373.4 (mm) (inches) 21.26" x 10.3" x 14.7"

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

(Monitor Head Only) (mm)

(inches) Stand Base Footprint Area

(mm)

(inches) Weight Packed Unpacked

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

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

250 x 250 9.84" x 9.84"

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

CONNECTIVITY

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

USB Hub

Audio Out

1 x USB 3.01 (Upstream) 4 x USB 3.01

(Downstream, Incl. 1 BC)

. Yes (3.5 mm)

POWER CONSUMPTION

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

Power Voltage 90 VAC - 264 VAC

MECHANICAL

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

VESA® Mount (mm x mm) Bezel Color Raven Black

Bezel Width

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

WHAT'S IN THE BOX

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

CERTIFICATIONS

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

Windows Certification Windows 7 / Windows 10 TüV Eye Comfort Certification

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













ThinkVision T24i-19 MONITOR



SPECIFICATIONS

DISPLAY

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

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

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

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

Buttons Languages

23.8" Wide In-Plane-Switching

WLED

FHD (1920 x 1080)

16:9 Yes Yes

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

16.7 Million 4 ms / 6 ms

5

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

DIMENSIONS (W x D

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

Lowest Position (mm)

(inches) Highest Position

(mm) (inches)

Size Unpacked without Stand (Monitor Head Only)

(mm) (inches)

Stand Base Footprint Area

(mm) (inches) Weiaht Packed Unpacked

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

540.2 x 261.75 x 373.4 21.26" x 10.3" x 14.7"

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

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

250 x 250 9.84" x 9.84"

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

1140 / 540 Units

CONNECTIVITY Video Input Signals

Video Cables Supplied

USB Hub Audio Out Power

VGA + HDMI™ + DisplayPort™

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

Yes (3.5 mm) Internal

POWER CONSUMPTION

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

Power Voltage 90 VAC - 264 VAC

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

MECHANICAL

Tilt Angle (Front / Back) Swivel Angle (Left / Right) Lift Range (mm) Pivot Stand Cable Management Kensington® Lock VESA® Mount (mm x mm)

Bezel Color Bezel Width Top (mm / inches)

Sides (mm / inches)

-5°/30° +/-45° 110 +/-90° LTPS Yes

Yes

Yes (100 X 100) Raven Black

2 / 0.08" 2 / 0.08"

WHAT'S IN THE BOX

Monitor with Stand 1 x Power Cable 1 x VGA Cable

1 x DisplayPort™ - DisplayPort™ Cable

1 x HDMI Cable (NA Only) Quick Setup Guide

CERTIFICATIONS

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

Windows Certification Windows 7 / Windows 10

TüV Eye Comfort Certification Yes TINY Support Yes Soundbar Support* Yes

EPS Cushion Package

Optional





WWW.LENOVO.COM













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



Presets display modes	WSXGA+: 1680X1050 Full HD: 1920x1080,1920x1200 HDMI: 19; DP: 11	ThinkVision T24m Wide Monitor	
Viewing adjustments Rotating screen	Tilt: 30° back, -5° forward; lift: 4.3" (110mm); swivel: +/-45°; detachable stand Screen pivots 90 degrees from landscape to portrait		
On screen display Control features USB hub	On screen display with digital user controls (8 languages) Direct access (buttons on front) for power, menu, input source select and brightness USB 3.0 Hub: 1 port into PC (USB 3.0); 4 ports for accessories (4 USB 3.0)		
Multimedia Multiple input	Audio-out, optional sound bar supportéd Support HDMI, DisplayPort, USB 3.1 Type-C		
Monitor connectors	(1) HDMI (1.4), digital, HDCP-compliant (2) DisplayPort (1.2), digital, HDCP-compliant (3) USB 3.1 Type-C		
Signal cables Mounting features Security	(1) 1.8 meter USB Type-C to USB Type-C cable Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)		
Ship group Monitor with stand, Safety and Warranty Information, 1.8 meter USB Type-C to USB Type-C cable, 1.8 meter black power cord		.8 meter USB Type-C to USB Type-C cable,	

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













T24v Wide Flat Panel Monitor Name

Bezel color

Type-model 61BCMAR6US / 61BCMAT6EU Panel White LED backlight

Viewable image size

Max view area (W x H)

Native resolution

Aspect ratio Pixel pitch (mm)

Dot/Pixel per Inch Brightness Contrast ratio

Pixel response time Color gamut

Viewing angle at 10:1 CR Stand

Bezel width

Dimensions (HxWxD)

Power supply

Weight Limited warranty

Black

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

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

16:9 0.2745 x 0.2745 mm

92 dpi 250 nits or cd/m² (typical)

1000:1 (typical)

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

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

500.5mm H x 540.2mm W x 261.9mm D

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

11.18 lb; 5.07 kg

3 year (includes backlight)

October 2017 Available date

VESA-compliant

Power management

Ergonomics Emission standards Environmental

VESA DDC2B/CI

ENERGY STAR® qualified

ISO 9241-307 FCC Class B

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

Preset resolutions VGA: 640x480, 720x400

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

WSXGA+: 1680x1050 Full HD: 1920x1080

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

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



ThinkVision T24v Wide Monitor

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

On screen display with digital user controls (8 languages)

Screen pivots 90 degrees from landscape to portrait

Viewing adjustments Rotating screen On screen display Control features

USB hub Multimedia Camera Multiple input

Monitor connectors

Security

Signal cables Mounting features

Integrated speakers, dual-array microphone, audio-in and Audio-out, optional sound bar supporte Integrated FHD camera with IR
Support HDMI, DisplayPort, VGA
(1) VGA 15-pin D-shell, analog, blue
(2) HDMI (1.4), digital, **HDCP-compliant**(3) DisplayPort, digital, black, **HDCP-compliant**(1) detachable, VGA 15-pin D-shell at each end, analog, 1.8 meter
(2) detachable, HDMI at each end, digital, 1.8 meter
Wall or desk mounting using the Extend Arm or third-party accessories, 100mm x 100mm mount Security keyhole for attachment of optional cable lock (Kensington® lock-compatible)

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

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

Limited Warranty

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

Accessories

Kensington MicroSaver Cable Lock Kensington Twin Head Cable Lock

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

See all monitors at www.lenovo.com/thinkvision

73P2582

45K1620













X24 Pro Wide Flat Panel Monitor Name

Bezel color **Black**

60E4ECR1US / 60E4ECT1US / 60E4ECT1EU Type-model

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

White LED backlight

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

Native resolution

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

Brightness 250 nits or cd/m2 (typical)

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

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

Stand Tilt stànd

Bezel width

Dimensions (HxWxD)

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

20 watts typical, 90 watts maximum, Power supply

<0.5 watts standby/suspend, universal,

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

July 2016 Available date

ENERGY STAR® qualified Power management Ergonomics ISO 9241-307

Emission standards FCC Class B

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

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

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

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

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

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

Rotating screen None

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

RealSense 3D camera SR300 Camera

mealsense 3D camera SR300

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

Monitor connectors

Signal cables

Mounting features None

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

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

Micro USB 3.0 cable (for using camera)

Limited Warranty Accessories

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

tail.page?DocID=UM008281

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

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

See all monitors at www.lenovo.com/thinkvision

Features

 Widescreen 23.8-inch monitor • Supports 1920x1080 resolution

 Includes dual input connection for attachment to two systems concurrently

EPEAT Silver certified

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

One cable docking through USB 3.1 Type C

with power delivery

• Windows Hello certified

Microsoft® Windows® 10 certified



ThinkVision X24 Pro Wide Monitor

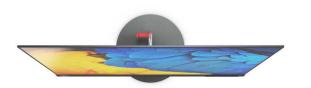












Lenovo ThinkVision X24-20

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

Rotating screen

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

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

USB hub None

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

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

Signal cables Mounting features

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

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

1.8 meter black power cord

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













Lenovo ThinkVision P27h

P27h Wide Flat Panel Monitor Name

Case color **Black**

61AFGAR1US / 61AFGAT1EU Type-model

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

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

Viewing angle at 10:1 CR

178° horizontal, 178° vertical Stand

Bezel width **Dimensions**

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

<0.5 watts sleep/off;

<0.5 watts switch off

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

Weight Limited warranty 3 year April 2017 Available date

VESA-compliant Power management Ergonomics Emission standards

Environmental

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

Presets display modes HDMI: 22; DP: 14

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

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

Multimedia

Camera

Viewing adjustments Rotating screen

Multiple input

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

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

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

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

1.8 meter black power cord

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

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

 Supports optional soundbar Support ThinkCentre Tiny

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27h Monitor

Lenovo July 2017













Lenovo ThinkVision P27q

P27q Wide Flat Panel Monitor Name

Case color Black Type-model 61A8GAT1EU

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

backlight

Viewable image size

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

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

Pixel pitch (mm) 0.2331 x 0.2331mm

Dot/Pixel per Inch 109 dpi

Brightness 350 nits or cd/m2 (typical)

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

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

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

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

Power supply

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

integrated (no external brick-like power supply)

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

3 year January 2017 Available date

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

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

ULE Gold

Preset resolutions VGA: 640x480, 720x400

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

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

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

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

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

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

Multimedia Audio-out, optional sound bar supported

Camera

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

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

Signal cables

Mounting features Security

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision

Features

27-inch IPS LED backlit monitor

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

 Support ThinkCentre Tiny • Supports optional soundbar

 Microsoft® Windows® 7 certified Microsoft Windows 10 certified



ThinkVision P27q Monitor













Lenovo ThinkVision P27u

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

(3) USB 3.1 Type-C

Signal cables

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

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

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

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













ThinkVision P32u-10 MONITOR



SPECIFICATIONS

DISPLAY
Panel Size Panel Type Backlight Resolution Aspect Ratio Anti-Glare Screen Dimensions (W x H) (mm) Maximum Brightness (Typical) Viewing Angle (H/V at CR 10:1) Contrast Ratio (Typical) Dynamic Contrast Ratio Pixel Pitch (W x H) (mm) Dot/Pixel Per Inch (DP/PPI) Color Gamut (1931)
Response Time (Typical)

POWER CONSUMPTION

32"
In-Plane Switching
WLED
3840 x 2160
10.0

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

107
99.5% AdobeRGB
6 ms

ENVIRONMENTAL Temperature

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

844 x 228 x 528

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

726 7 4 67 7 4 471 5

DIMENSIONS (W x D x H)

Size Unpacked with Stand

Size Packed

(mm) (inches)

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

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

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

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

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

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

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

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

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution

MEGUANUGAL

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

COMPLIANCE

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

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability WW





WWW.LENOVO.COM













anti-glare Curvature 1800R

Backlight

WLED

HDR

Panel Type

DISPLAY

Panel Size

43.4 inches

1052.3 x 328.8mm

41.4 x 12.9 inches

VA NearEdgeless,

Screen Dimensions (H x V)

ThinkVision P44w-10

Specifications

32:10 Resolution 3840 x 1200

Pixel Pitch (H x V)

0.2740 x 0.2740mm

Viewing Angle (H x V)

VESA Certified DisplayHDR™ 400

Aspect Ratio

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

Refresh Rate Max. 144Hz **Contrast Ratio (typical)**

3000:1 **Dynamic Contrast Ratio (typical)**

Color Support (typical) 1.07B

Color Gamut sRGB: 99.5%

BT.709: 99.5% DCI-P3: 90%

Brightness

380 nits (typical)

450 nits (peak)

CONNECTIVITY

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

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

Audio Out Yes (3.5mm) **USB Hub**

Yes

USB Upstream 2 x USB 3.1 (1 x USB Type-C Gen1, 269.8 x 461.1 x 1058.3mm 10.62 x 18.15 x 41.67 inches Size Unpacked w/stand (D x H x W) (Highest

Position)

1 x USB Type-C Gen2)

4 x USB 3.1 Gen1 (1 BC)

Power Consumption

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

Size Packed (D x H x W)

47.99 x 19.68 x 14.80 inches

Size Unpacked w/stand

269.8 x 591.1 x 1058.3mm

10.62 x 23.27 x 41.67 inches

Size Unpacked w/o stand

(D x H x W) (Lowest Position)

Sleep/Off Mode: <0.5W

DIMENSIONS

1219 x 500 x 376mm

USB Downstream

Power

Internal

(D x H x W) (Head Only) 137.2 x 366.1 x 1058.3mm 5.40 x 14.21 x 41.67 inches Weight Packed 18.59kg/40.98lbs. Weight Unpacked

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

SPECIAL FEATURES

Anti-Glare Yes

13.45kg/29.65lbs.

PIP/PBP Yes **Software**

Yes (ThinkColor)

Speaker Supports optional Harman Kardon certified speaker

-5°/22°

Yes

MECHANICAL

Tilt Angle (front/back)

Swivel Angle (left/right)

Kensington™ Lock Slot

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

Lift (Max. range)

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

Cable Management

Bezel Width (side)

Bezel Width (top/bottom)

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x HDMI cable

Yes

Bezel Color

Raven Black

2.4/25.6mm

2.4mm

CCC Yes

ENERGY STAR® Rating

CERTIFICATIONS

8.0

RoHS

Yes

ULE

Gold

TCO

TÜV Eye Comfort



Windows Certification Windows 7, Windows 10

China Energy Efficiency

Tier 2 **Ambient Operating Temperature**

0°C to 45°C

Yes

Standard

*with FreeSync support graphic cards © 2019 Lenovo. All rights reserved. Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: - 5 Gbit/s for USB 3.1 Gent; 10 Gbit/s for USB 3.1 Gent & 2.0 Gbit/s for USB 3.2. These products are available while supplies last. Prices shown are subject to change without notice. For any questions concerning price, please contact your Lenovo Account Executive. Lenovo is not responsible for photographic or typographic errors. Warranty: For a copy of applicable warranties, write to: Warranty Information, 500 Park Offices Drive, RTP, NC 27709, Attn: Dept. ZPYA/B600. Lenovo makes no representation or warranty regarding third-party products or services. Trademarks: Lenovo, the Lenovo logo, Rescue and Recovery, ThinkPad, ThinkCentre, ThinkStation, ThinkVantage, and ThinkVision are trademarks or registered trademarks of Lenovo. Microsoft, Windows, and Vista are registered trademarks of Microsoft Corporation. Intel, the Intel logo, Intel Inside, Intel Core, and Core Inside are trademarks of Intel Corporation in the U.S. and/or other countries. Other company, product, and service names may be trademarks or service marks of others.













Think Vision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

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

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

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

(Lowest Position)

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

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

(Highest Position)

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

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

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

Weight Packed (kg/lbs.)

6.80kg / 14.99 lbs.

Weight Unpacked (kg/lbs.)

4.76kg / 10.49 lbs.

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

4.22ka / 9.30 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

(by VESA mount PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount

Yes (100 mm)

Kensington[™] Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.68 mm

WHAT'S IN THE BOX

Monitor with stand

1x HDMI Cable

1x VGA Cable (AP. EMEA only)

1x Power Cable

Quick setup quide

CERTIFICATIONS

ENERGY STAR Rating

7.0

TCO

70

EPEAT™

Gold

ULE

Gold

RoHS

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

TÜV Eye Confort Certification

Yes

























Think Vision T25d-10

DISPLAY

Panel Size

25.0 inches

Screen Dimensions (H x V)

533.45 x 338.76mm

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:10

Resolution

1920 x 1200 pixels

Refresh Rate

60Hz

Pixel Pitch (H x V)

0.2789 x 0.2823mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

300 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support

16.7M

CONNECTIVITY

Video Input Signals HDMI 1.4 + DP 1.2 + VGA

Video Cables Supplied

DP + HDMI*

Video Cable Length

1.8m

USB Hub

Yes

USB Upstream

1 x USB 3.1 Gen1

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC

Audio Out

Yes (3.5mm)

POWER

Power Consumption (Typical/Max)

25W/66W

Power Consumption Sleep/Off Mode

<0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

16.54W

ENERGY STAR® (E_{тес}) 52.06kWh

Voltage Required

100-240VAC (50/60Hz)

DIMENSIONS

Size Packed (D x H x W)

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

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

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

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

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

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

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

Weight Packed

7.8kg/17.20lbs.

Weight Unpacked

5.5kg/12.13lbs.

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

SPECIAL FEATURES

Anti-glare

Yes

Optional Soundbar Support

Yes

ThinkCentre Tiny Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

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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Think Vision® T27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

 0.3110×0.3110

Viewing angle (H x V)

178°/178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4 + DP 1.2

USB Hub

Yes

1 x USB 3.0 (Upstream)

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

Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

Power Consumption

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

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

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

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

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

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

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

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

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

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

Weight Packed (kg/lbs.)

9.32kg / 20.55 lbs.

Weight Unpacked (kg/lbs.)

6.55kg / 14.44 lbs.

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

4.60kg / 10.14 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tinv)

Yes

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

PN:4XF0N03161)

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

-45°/+45°

Lift (Max range)

110 mm

Pivot

-90°/90°

VESA Mount

Yes (100 mm)

Kensington[™] Lock Slot

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

WHAT'S IN THE BOX

Monitor with stand

1 x Power cable

1 x DP-DP cable

1 x HDMI cable (NA only)

1 x USB 3.0 cable

Quick setup guide

CERTIFICATIONS

ENERGY STAR Rating

7.0

CCC

Yes

TCO

7.0

EPEAT™

Gold

ULE

Gold

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

Eye Comfort Certification

Yes



























ThinkVision T27p-10

DISPLAY

Panel Size

27.0 inches

Screen Dimensions (H x V) 596.74 x 335.66mm

Panel Type

In-Plane Switching

Backlight WLED

Aspect Ratio

16:9

Resolution

3840 x 2160 pixels

Pixel Pitch (H x V) 0.1554 x 0.1554mm

Viewing Angle (H x V)

178°/178°

Response Time (gray to gray)

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

Refresh Rate

60Hz

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Brightness (typical)

350 cd/m²

Color Gamut sRGB (CIE 1931)

99%

Color Support 1.07 Billion

POWER

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

Power Consumption Sleep/Off Mode <0.5W

Power Consumption Switch Off-Mode

<0.3W

Power Supply

Internal

ENERGY STAR® (Pon)

23.40W

ENERGY STAR® (E_{TEC})

101.94kWh

Voltage Required 100-240VAC (50/60Hz)

CONNECTIVITY

Video Input Signals

HDMI 2.0 + DP 1.2 + USB 3.1 Type-C™ (DP 1.2 Alt Mode)

Video Cables Supplied USB 3.1 Type-C™ + HDMI

Video Cable Length

1.8m

USB Hub Yes

USB Upstream

1 x USB 3.1 Gen1 (by USB Type-C™)

USB Downstream

4 x USB 3.1 Gen1 (with 1 BC)

Audio Out

Yes (3.5mm)

DIMENSIONS

Size Packed (D x H x W)

732 x 210 x 453mm/ 28.82 x 8.27 x 17.83 inches

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

269.8 x 403.3 x 611.6mm/ 10.62 x 15.88 x 24.08 inches

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

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

Weight Packed 11.00kg/24.25lbs.

Weight Unpacked 6.95kg/15.32lbs.

Weight (Monitor Head Only)

Weight (Monitor Head Only 5.0kg/11.02lbs.

SPECIAL FEATURES

Smart Power*

Yes

Anti-glare

Yes

ThinkCentre Tiny Support

Optional Soundbar Support

Yes

MECHANICAL

Tilt Angle (front/back)

-5°/30°

Swivel Angle (left/right)

+/-45°

Lift

Yes (110mm)

Pivot +/-90°

VESA Mount Capability

Yes (100 x 100mm)

Kensington™ Lock Slot Yes

Bezel Width (Side)

2.0mm

Bezel Width (top/bottom)

2.0/24.5mm

WHAT'S IN THE BOX

Monitor with stand 1 x Power Cable

1 x HDMI Cable

1 x USB Type-C[™] to Type-C[™] cable Quick Setup Guide CERTIFICATIONS

ENERGY STAR® Rating

7.1

EU RoHS

Yes

CCC Yes

Windows Certification
Windows 7. Windows 10

China Energy Efficiency Standard

Tier 2

TÜV Eye Comfort

Yes

TCO

TCO 8.0/TCO Edge 2.0

ULE Gold













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

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

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Lenovo ThinkVision X1

X1 Wide Flat Panel Monitor Name

Case color **Black**

Type-model 60E2GAR1US / 60E2GAT1US / 60E2GAT1EU

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

Viewable image size

Max view area (W x H)

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

300 nits or cd/m2 (typical) Brightness

Contrast ratio 1300:1 (typical) Pixel response time 6ms

Color gamut 99%

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

(HxWxD, including stand) Power supply

40 watts typical,

130 watts maximum (with USB),

<0.5 watts sleep/off;

< 0.5 watts switch off

14.11 lb; 6.40kg (including stand) Weight

Limited warranty4 3 year Available date March 2016

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

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

ULE Gold

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

SVGA: 800x600

XGA: 1024x768, 1152x864

SXGA: 1280x1024

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

WXGA+: 1440x900, 1600x900

WSXGA+: 1680x1050

Full HD: 1920x1080, 1920x1200

UHD: 3840x2160

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

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

Rotating screen None

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

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

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

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

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

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

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

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

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

Limited Warranty

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

Accessories

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

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

See all monitors at www.lenovo.com/thinkvision



Features

27-inch IPS LED backlit monitor with speaker

• Supports 3840x2160 resolution

Microsoft® Windows® 7 certified

• Microsoft Windows 10 certified

• 3watts x 2 stereo speakers

• 5-Ports USB hub, support USB Type-C

ThinkVision X1 Monitor

See footnotes for important warranty information





















ThinkVision X1 (2nd GEN) MONITOR

EXTREME STYLISH, EXTREME FOREFRONT.



THE MILESTONE OF X-SERIES, 27" FULL-SCREEN, 4K, THUNDERBOLT™ 3 MONITOR.

Pushing the limit of screen share ratio with innovative technology, the 27" Lenovo[™] ThinkVision® X1 (2nd GEN) display brings full-screen and ultra-slim appearance in elegant design. With 4K resolution and >99% sRGB color gamut, you will be assured of excellent watching experience and Thunderbolt[™] 3 interface will bring the best user experience. "Motor" camera is first used on monitor, which will move up and down automatically and with it you will own standard VoIP system.

WHY YOU SHOULD BUY THE LENOVO THINKVISION X1 (2nd GEN) MONITOR



Full-screen appearance

With world's slimmest (4.7 mm) 27" 4K TBT monitor you will experience full-screen 4-side Near-Edgeless display with the screen ratio of approximately 93%. The monitor also comes with a metal stand and a base.



Brilliant performance

The 4K UHD IPS screen displays 3840 x 2160 resolution at 60 Hz, 99% sRGB color gamut, 10-bit depth, with 1.07 billion color support assures you stunning visuals and superb color experience.



Convenient user experience

Total versatility with
Thunderbolt™ 3 interface
supporting 4K + USB 3.0 &
45W PD + motor-camera with
dual-array microphone. A Think
RedDot tracking button is
integrated in the back cover.

THE LENOVO THINKVISION X1 (2nd GEN) MONITOR IS BEST SUITED FOR



The Executives and CXO of company.



SOHO and Gold Collars with high income.



Trendsetters who pursue an extreme and forefront monitor.













ThinkVisinn X1 (2nd GEN) MONITOR



SPECIFICATIONS

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

Aspect Ratio Anti-Glare Yes

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

0.1554 x 0.1554

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

POWER CONSUMPTION

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

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

SIGNAL INPUT

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

Video Cable Length

Yes (4 x USB 3.0) USB Hub

USB Cable Supplied N/A Audio-Jack

SIGNAL INTERFACE / PERFORMANCE

Horizontal Frequency Vertical Frequency Native Resolution Maximum Pixel Clock Speed/

Bandwidth

Default Color Temperature Preset Modes

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

20 Gbps 6500K 24

1.2 / 0.05"

1.2 / 0.05"

18 m

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

ENVIRONMENTAL

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

Humidity

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

Altitude

16 000 ft Operating Non-Operating 40,000 ft

Arsenic-Free Glass Yes

PVC-Free Yes (W/O cable)

Mercury-Free Yes PCC % of Plastic Resins 25%

DIMENSIONS (W x D x H)

Size Packed (mm)

718 x 140 x 470 28.27" x 5.51" x 18.5" (inches) Size Unpacked with Stand

(mm)

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

Size Unpacked without Stand (Monitor Head Only)

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

Distance from Table to Panel Lowest Pixel at Bottom of Screen

134 / 5.276" (mm / inches)

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

Stand Base Footprint Area

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

Weight

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

MECHANICAL

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

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

COMPLIANCE

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

WARRANTY AND AVAILABILITY

Warranty 3 Years Geography Availability ww





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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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